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Seeing through arithmetic

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Seeing through arithmetic

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by Maurice L. Hartung, Henry Van Engen,
Lois Knowles, and Catharine Mahoney

Scott, Foresman and Company

Chicago, Atlanta, Dallas, Palo Alto, New York

This is the third book of The Basic Mathematics Program,
which is a unit of THE CURRICULUM FOUNDATION SERIES®,
published by Scott, Foresman and Company.

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This book was designed by William Nicoll
and illustrated by Janet LaSalle with the assistance of others.

The Table of Contents, Index, and information concerning the vocabulary
are on pages 252 to 256.

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Moving forward

On pages 3 to 6 you will learn about the groups that make the numbers 2, 3, 5, and 7.

A

B

C

D

5 boys are playing.
2 boys are coming to play.
Then ▒ boys will be playing.
5 boys plus 2 boys equal ▒ boys.
5 plus 2 equals ▒.

E

6 boys are playing.
1 boy is coming to play.
Then ▒ boys will be playing.
6 boys plus 1 boy equal ▒ boys.
6 plus 1 equals ▒.

F

How many girls are playing?
How many girls are coming to play?
Then ▒ girls will be playing.
3 girls plus 2 girls equal ▒ girls.
3 girls + 2 girls = ▒ girls
3 plus 2 equals ▒.
3 + 2 = ▒

G

How many girls are playing?
How many girls are coming to play?
Then ▒ girls will be playing.
2 girls plus 5 girls equal ▒ girls.
2 girls + 5 girls = ▒ girls
2 plus 5 equals ▒.
2 + 5 = ▒

H

How many boys are playing ball?
How many boys are coming to play?
Then ▒ boys will be playing ball.
4 boys plus 3 boys equal ▒ boys.
4 boys + 3 boys = ▒ boys
4 plus 3 = ▒
Add 3 to 4. 4 + 3 = ▒

I

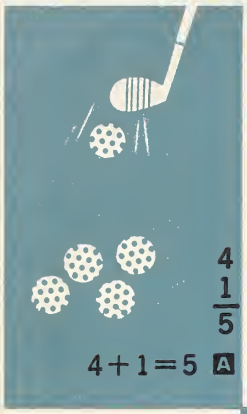
How many boys are playing?
How many boys are coming to play?
Then ▒ boys will be playing.
5 boys + 2 boys = ▒ boys
5 plus 2 = ▒
Add 2 to 5. 5 + 2 = ▒

J

How many boys are carrying the box?
How many boys are coming to help?
Then there will be ▒ boys.
2 boys + 3 boys = ▒ boys
2 plus 3 = ▒
Add 3 to 2. 2 + 3 = ▒

K

How many boys are playing ball?
How many boys are coming to play?
Then there will be ▒ boys.
1 boy + 6 boys = ▒ boys
1 plus 6 = ▒
Add 6 to 1. 1 + 6 = ▒



4
1
5

4+1=5 A

2
5

2+5= B

A 4 balls plus 1 ball equal ▭ balls.
B 5 jacks plus 2 jacks equal ▭ jacks.
C 1 jack plus 4 jacks equals ▭ jacks.
D 2 balls plus 5 balls equal ▭ balls.
E 3 balls plus 4 balls equal ▭ balls.
F 3 jacks plus 2 jacks equal ▭ jacks.

A	5+2=▭	H	2+5=▭
B	1+4=▭	I	4+3=▭
C	2+3=▭	J	1+2=▭
D	1+6=▭	K	4+1=▭
E	2+1=▭	L	1+1=▭
F	3+2=▭	M	3+4=▭
G	6+1=▭	N	5+2=▭

3
2

3+2= C

1
4

1+4= D

Add

A	B	C	D	E	F
4 1	3 2	6 1	1 1	4 3	1 6

G	H	I	J	K	L
2 1	3 4	5 2	1 2	1 4	2 3

M	N	O	P	Q	R
2 5	6 1	3 4	5 2	4 3	3 2

3
4

3+4= E

5
2

5+2= F

Now you should know how to add the numbers that make 2, 3, 5, and 7.

Keeping skillful

A

B

C

A 1 plus 4 = ▒
B 5 plus 2 equals ▒.
C Add 2 to 5.
D 6 plus 1 equals ▒.
E Add 1 to 1.
F Add 2 to 3.
G 4 plus 3 = ▒
H Add 2 to 1.
I 3 plus 2 equals ▒.
J 2 plus 5 equals ▒.
K 1 plus 6 = ▒
L Add 5 to 2.
M Add 3 to 4.
N 4 plus 1 equals ▒.
O 2 plus 3 = ▒
P Add 1 to 2.
Q Add 4 to 3.
R 1 plus 2 = ▒
S 1 plus 1 equals ▒.

A 1+4=▒	I 1+6=▒	Q 2+5=▒
B 1+1=▒	J 4+1=▒	R 6+1=▒
C 3+4=▒	K 5+2=▒	S 1+1=▒
D 6+1=▒	L 1+2=▒	T 2+1=▒
E 4+3=▒	M 4+3=▒	U 3+2=▒
F 2+1=▒	N 2+3=▒	V 5+2=▒
G 2+5=▒	O 3+4=▒	W 2+3=▒
H 3+2=▒	P 1+6=▒	X 1+4=▒

Add

A	B	C	D	E	F	G
2	6	4	1	1	2	4
3	1	3	1	4	5	1
▒	▒	▒	▒	▒	▒	▒

H	I	J	K	L	M	N
1	3	1	3	5	2	6
2	2	6	4	2	1	1
▒	▒	▒	▒	▒	▒	▒

Moving forward

On pages 8 to 12 you will learn to find how many are left when a group is taken away from 2, 3, 5, or 7.

A

B

C

D

7 pictures were on the table.
Nancy is taking 3 of them away.
Then ▒ pictures will be left.
7 pictures minus 3 pictures equal ▒ pictures.
7 minus 3 equals ▒.

E

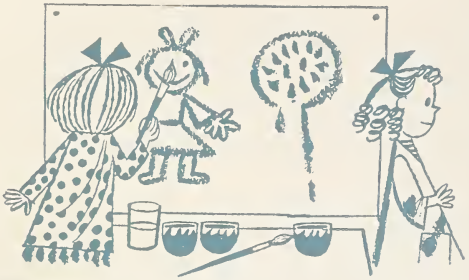
7 boxes were on the table.
Tom is taking 5 of them away.
Then ▒ boxes will be left.
7 boxes minus 5 boxes equal ▒ boxes.
7 minus 5 equals ▒.

F

How many boxes were on the table?
How many is Don taking away?
Then ▒ box will be left.
7 boxes minus 6 boxes equal ▒ box.
7 boxes − 6 boxes = ▒ box
7 minus 6 equals ▒.
7 − 6 = ▒

G

How many pictures were on the table?
How many is Betty taking away?
Then ▒ pictures will be left.
7 pictures minus 1 picture equal ▒ pictures.
7 pictures − 1 picture = ▒ pictures
7 minus 1 equals ▒.
7 − 1 = ▒



H

2 girls were painting pictures.
How many girls are going away?
Then ▒ girl will be painting.
2 girls minus 1 girl equal ▒ girl.
2 girls − 1 girl = ▒ girl
2 minus 1 = ▒
Subtract 1 from 2. 2 − 1 = ▒

I

7 boys were making books.
How many boys are going away?
Then ▒ boys will be making books.
7 boys − 4 boys = ▒ boys
7 minus 4 = ▒
Subtract 4 from 7. 7 − 4 = ▒

J

5 girls were planting flowers.
How many girls are going away?
Then ▒ girls will be planting flowers.
5 girls − 1 girl = ▒ girls
5 minus 1 = ▒
Subtract 1 from 5. 5 − 1 = ▒

K

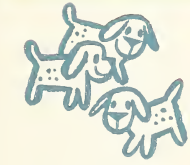
7 boys were reading.
How many boys are going away?
Then ▒ boys will be reading.
7 minus 5 = ▒
Subtract 5 from 7. 7 − 5 = ▒

7
4
3

7−4=3 A

3
2

3−2= B



5
2

5−2= C

7
1

7−1= D

7
3

7−3= E

7
6

7−6= F

A 7 dogs minus 4 dogs equal ▒ dogs.
B 5 dogs minus 2 dogs equal ▒ dogs.
C 7 boxes minus 6 boxes equal ▒ box.
D 3 dogs minus 2 dogs equal ▒ dog.
E 7 boxes minus 1 box equal ▒ boxes.
F 7 boxes minus 3 boxes equal ▒ boxes.

A 3−2=▒
B 2−1=▒
C 7−3=▒
D 7−6=▒
E 7−2=▒
F 3−1=▒
G 5−3=▒
H 5−2=▒
I 7−4=▒
J 7−5=▒

K 7−1=▒
L 5−1=▒
M 7−3=▒
N 5−4=▒
O 7−6=▒
P 3−2=▒
Q 7−5=▒
R 5−2=▒
S 7−2=▒
T 7−4=▒

Subtract

A	B	C	D	E	F
5	7	7	5	7	3
3	1	2	4	6	2
▒	▒	▒	▒	▒	▒

G	H	I	J	K	L
7	5	7	5	7	2
5	2	3	1	4	1
▒	▒	▒	▒	▒	▒

M	N	O	P	Q	R
3	5	7	5	7	3
1	3	5	4	2	1
▒	▒	▒	▒	▒	▒

A

B

C

A 7 minus 5 equals ▒.
B Subtract 2 from 5.
C Subtract 1 from 3.
D 5 minus 1 = ▒
E 7 minus 2 equals ▒.
F 2 minus 1 equals ▒.
G Subtract 3 from 7.
H Subtract 4 from 5.
I 5 minus 3 = ▒
J Subtract 2 from 3.
K Subtract 6 from 7.
L 7 minus 4 = ▒
M Subtract 1 from 7.
N 5 minus 2 equals ▒.
O 3 minus 1 = ▒
P Subtract 2 from 7.
Q 7 minus 5 equals ▒.
R Subtract 1 from 2.
S 7 minus 6 = ▒

A $7-3=$▒	I $2-1=$▒	Q $7-2=$▒
B $7-5=$▒	J $5-3=$▒	R $3-1=$▒
C $5-1=$▒	K $7-4=$▒	S $5-3=$▒
D $7-2=$▒	L $3-1=$▒	T $7-5=$▒
E $3-2=$▒	M $5-4=$▒	U $3-2=$▒
F $7-1=$▒	N $7-3=$▒	V $7-6=$▒
G $5-2=$▒	O $5-1=$▒	W $5-4=$▒
H $7-4=$▒	P $7-6=$▒	X $7-1=$▒

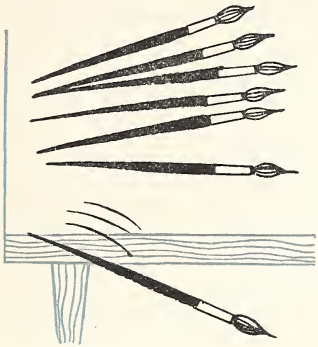
Subtract

A	B	C	D	E	F	G
7	5	7	7	2	5	3
3	1	6	2	1	2	1
▒	▒	▒	▒	▒	▒	▒

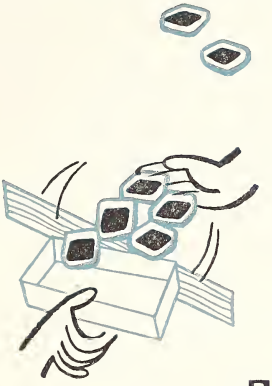
H	I	J	K	L	M	N
7	3	5	7	5	7	7
4	2	4	1	3	5	6
▒	▒	▒	▒	▒	▒	▒

Now you should know how to subtract from the numbers 2, 3, 5, and 7.

Keeping skillful



A



B

C

A Add 5 to 2.
B 7 minus 5 equals ▢.
C Subtract 3 from 5.
D 3 plus 2 = ▢
E Add 3 to 4.
F 5 minus 2 equals ▢.
G 2 plus 5 equals ▢.
H Subtract 4 from 7.
I Subtract 1 from 2.
J 7 minus 2 = ▢
K Add 6 to 1.
L 3 minus 2 equals ▢.
M 5 minus 4 = ▢
N 4 plus 1 equals ▢.
O Add 1 to 4.
P Subtract 1 from 7.
Q Add 2 to 1.
R 7 minus 3 = ▢
S 1 plus 6 equals ▢.

A	3 + 2 = ▢	H	4 + 3 = ▢
B	7 − 6 = ▢	I	7 − 3 = ▢
C	5 − 3 = ▢	J	2 + 3 = ▢
D	3 + 4 = ▢	K	5 + 2 = ▢
E	1 + 4 = ▢	L	1 + 6 = ▢
F	7 − 2 = ▢	M	2 + 5 = ▢
G	3 − 1 = ▢	N	7 − 5 = ▢

O	1 + 2 = ▢
P	3 − 2 = ▢
Q	7 − 4 = ▢
R	6 + 1 = ▢
S	5 − 2 = ▢
T	4 + 1 = ▢
U	5 − 4 = ▢

Add

A	B	C	D	E	F	G
3	4	1	4	6	2	1
2	1	2	3	1	3	1
▢	▢	▢	▢	▢	▢	▢

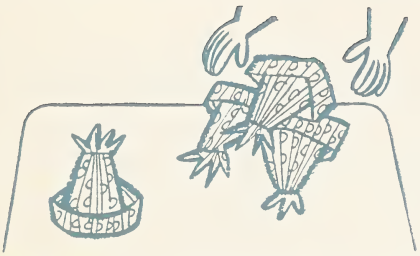
Subtract

H	I	J	K	L	M	N
7	7	3	5	7	5	7
4	5	2	4	2	2	6
▢	▢	▢	▢	▢	▢	▢

Moving forward

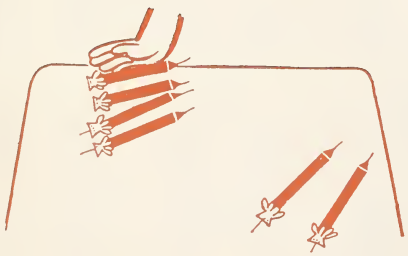
You will learn how to add the numbers that make 4 and 6.
You will also learn how to subtract from 4 and from 6.

A



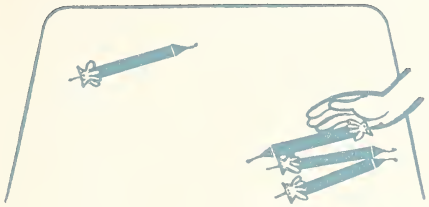
B 1 hat is on the table.
Betty is putting 3 more hats on the table.
Then ▒ hats will be on the table.
Add 3 to 1. $1 + 3 = \square$

C How many cups are on the table?
Nancy is putting ▒ more cups on the table.
Then ▒ cups will be on the table.
Add 3 to 3. $3 + 3 = \square$



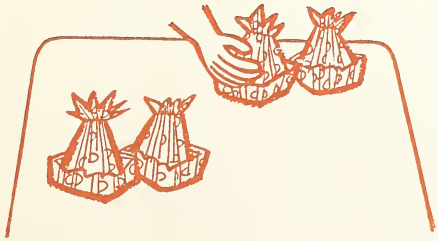
D How many birthday candles are on the table?
Carol is putting ▒ more candles on the table.
Then ▒ candles will be on the table.
Add 4 to 2. $2 + 4 = \square$

E



F 4 birthday candles were on the table.
How many candles is Nancy taking away?
Then ▒ candle will be on the table.
Subtract 3 from 4. $4-3=$▒

G 6 cups were on the table.
How many cups is Carol taking away?
Then ▒ cups will be on the table.
Subtract 3 from 6. $6-3=$▒



H 4 hats were on the table.
How many hats is Betty taking away?
Then ▒ hats will be on the table.
Subtract 2 from 4. $4-2=$▒

A 1 plus 5 equals ▒.
B 6 minus 5 equals ▒.
C 3 plus 1 equals ▒.
D 6 minus 1 equals ▒.
E 2 plus 2 equals ▒.
F 6 minus 2 equals ▒.

A Add 3 to 3.
B Subtract 2 from 4.
C Subtract 3 from 6.
D Add 4 to 2.

E $2+2=$▒
F $4-3=$▒
G $5+1=$▒
H $6-4=$▒
I $6-2=$▒
J $1+5=$▒
K $4+2=$▒
L $1+3=$▒
M $6-3=$▒
N $4-1=$▒
O $3+3=$▒
P $6-5=$▒
Q $6-1=$▒
R $2+4=$▒

Add

A	B	C	D	E	F
3	2	5	4	2	1
3	4	1	2	2	5
▒	▒	▒	▒	▒	▒

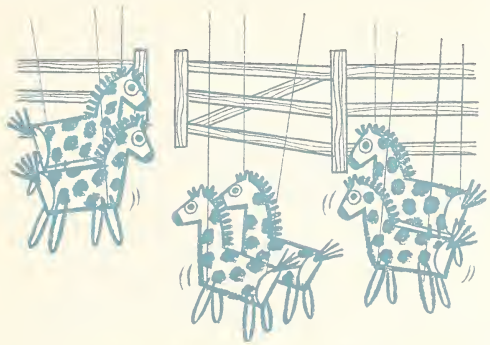
Subtract

G	H	I	J	K	L
6	4	6	4	6	4
1	2	5	3	4	1
▒	▒	▒	▒	▒	▒

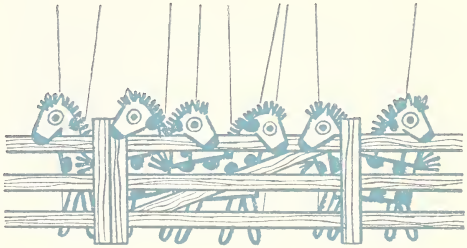
Now you should know how to add the numbers that make 4 and 6 and how to subtract from the numbers 4 and 6.

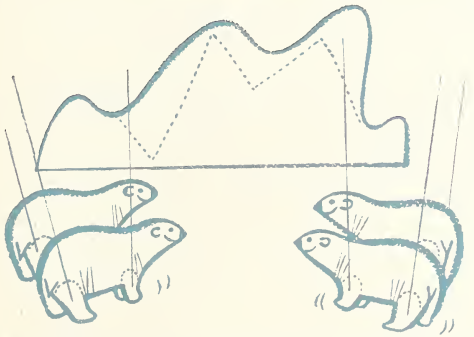
Moving forward

On pages 17 and 18 you will learn how to put equal groups together to make groups of 4 and 6.

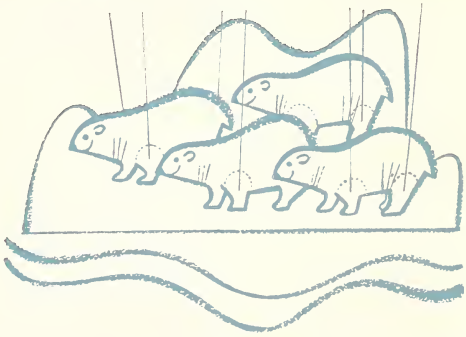


A





B

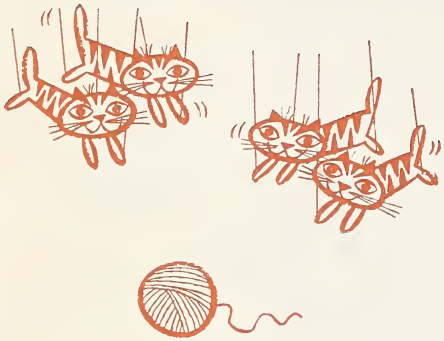


C

D

2 groups of frogs are going to the pond.
There are 3 frogs in each group.
There will be ▒ frogs in the pond.

2 groups of 3 frogs equal ▒ frogs.
2 groups of 3 equal 2 threes.
2 threes = ▒
2 threes means 3 multiplied by 2.
3 multiplied by 2 = ▒



E

How many groups of kittens are coming to play?
How many kittens are in each group?
Then ▒ kittens will be playing.

2 groups of 2 kittens equal ▒ kittens.
2 twos = ▒
2 multiplied by 2 = ▒

F

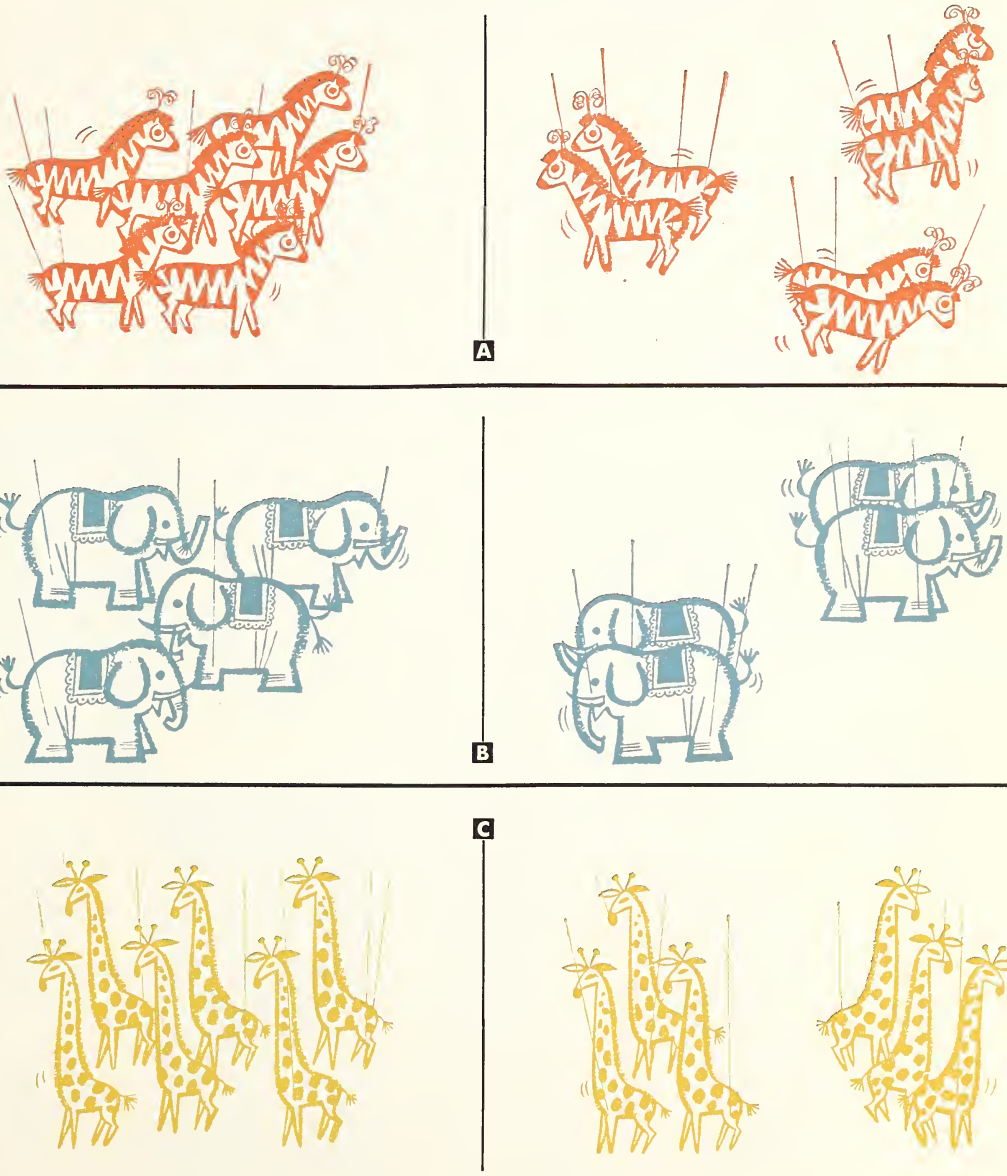
How many groups of dogs are coming to eat?
How many dogs are in each group?
Then ▒ dogs will be eating.

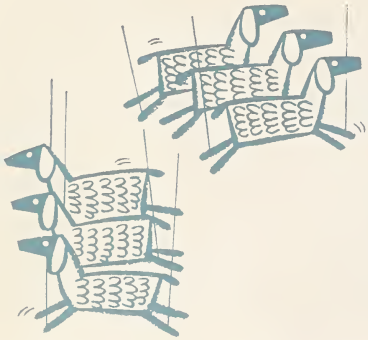
3 groups of 2 dogs equal ▒ dogs.
3 twos = ▒
2 multiplied by 3 = ▒

Now you have learned how to make groups of 4 and 6 by putting together equal groups.

Moving forward

On pages 19 and 20 you will learn how to separate groups of 4 and 6 into equal groups.



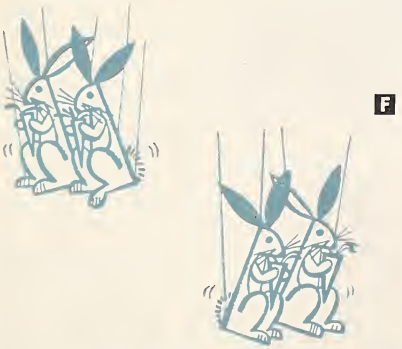


D 6 lambs were playing.
Now they are separating into groups of 3.
The 6 lambs are dividing into groups of 3.
There are 2 groups of 3 lambs.

6 divided into threes means 6 divided by 3.
6 divided by 3 = ▒

E 6 squirrels were playing.
Now they are separating into groups of ▒.
They are dividing into ▒ groups of 2.
How many groups of 2 squirrels are there?

6 divided into twos means 6 divided by 2.
6 divided by 2 = ▒



F 4 rabbits were eating in the garden.
Now they are separating into groups of ▒.
They are dividing into ▒ groups of 2.
How many groups of 2 rabbits are there?

4 divided into twos means 4 divided by 2.
4 divided by 2 = ▒

Now you have learned how groups of 4 and 6 can be divided into equal groups.

Moving forward

On pages 21 to 25 you will learn how to add numbers to make 8 and how to subtract from 8. You will also learn about the equal groups for the number 8.

A 5 saws plus 3 saws equal ▒ saws.
Add 3 to 5.
$5 + 3 =$ ▒

B 6 wheels plus 2 wheels equal ▒ wheels.
Add 2 to 6.
$6 + 2 =$ ▒

C 4 cans plus 4 cans equal ▒ cans.
Add 4 to 4.
$4 + 4 =$ ▒

D 1 box plus 7 boxes equals ▒ boxes.
Add 7 to 1.
$1 + 7 =$ ▒

E 2 cans plus 6 cans equal ▒ cans.
Add 6 to 2.
$2 + 6 =$ ▒

F 3 hammers plus 5 hammers equal ▒ hammers.
Add 5 to 3.
$3 + 5 =$ ▒

A 8 cans minus 3 cans equal ▒ cans.
Subtract 3 from 8.
8 − 3 = ▒

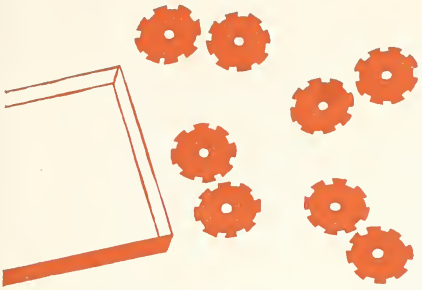
B 8 boxes minus 7 boxes equal ▒ box.
Subtract 7 from 8.
8 − 7 = ▒

C 8 wheels minus 5 wheels equal ▒ wheels.
Subtract 5 from 8.
8 − 5 = ▒

D 8 spools minus 4 spools equal ▒ spools.
Subtract 4 from 8.
8 − 4 = ▒

E 8 hammers minus 1 hammer equal ▒ hammers.
Subtract 1 from 8.
8 − 1 = ▒

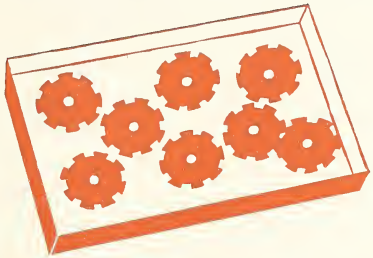
F 8 cans minus 6 cans equal ▒ cans.
Subtract 6 from 8.
8 − 6 = ▒

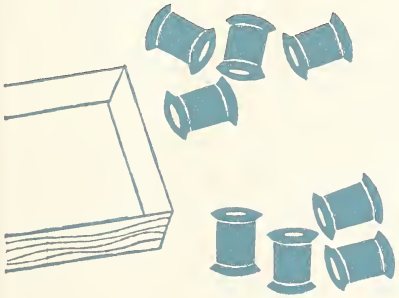


A

How many groups of wheels are on the table?
How many wheels are in each group?
Nancy put the wheels into a box.
Now how many wheels are in the box?

4 groups of 2 = ▒
4 twos = ▒
2 multiplied by 4 = ▒
Multiply 2 by 4.
2 multiplied by 4 means 4 times 2.
4 times 2 = ▒

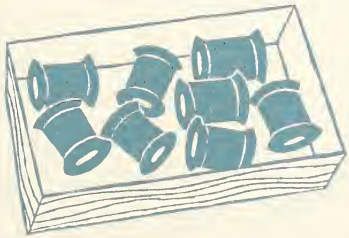




B

How many groups of spools are on the table?
How many spools are in each group?
Tom put the spools into a box.
Now how many spools are in the box?

2 groups of 4 = ▒
2 fours = ▒
4 multiplied by 2 = ▒
Multiply 4 by 2.
4 multiplied by 2 means 2 times 4.
2 times 4 = ▒



A Multiply 4 by 2. 2 times 4 = ▒
B Multiply 2 by 2. 2 times 2 = ▒
C Multiply 2 by 4. 4 times 2 = ▒

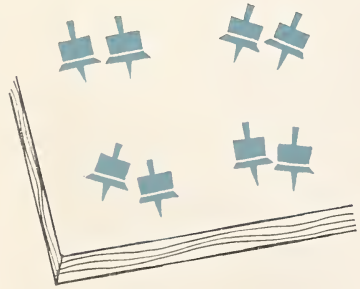
How many dolls are on the table?
Betty divided them into groups of 4 dolls.
Now she has ▒ groups of 4 dolls.

A

8 divided into groups of 4 makes ▒ groups.
8 divided into fours means 8 divided by 4.
8 divided by 4 = ▒
Divide 8 by 4.

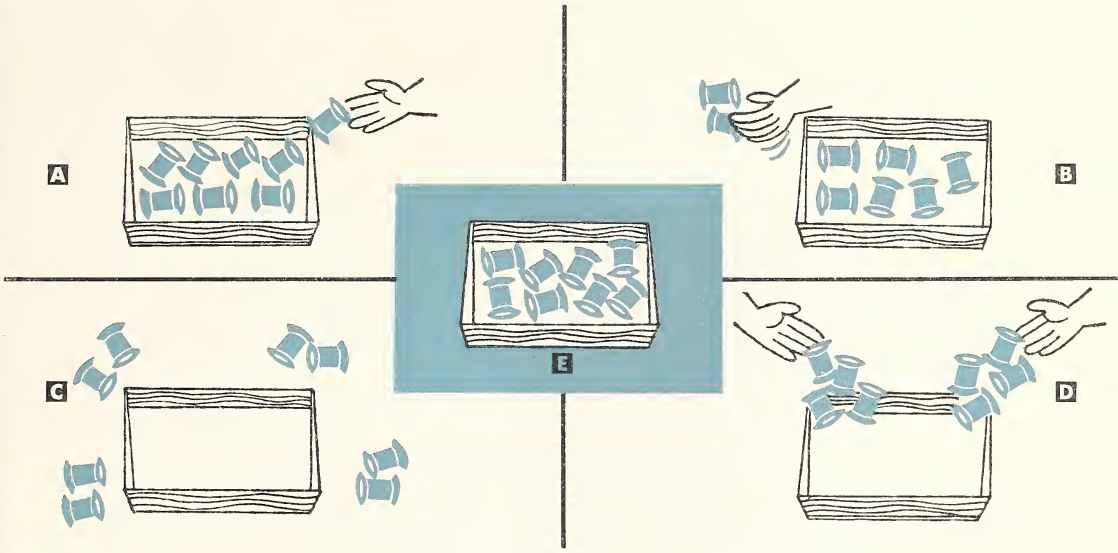
How many tops are on the table?
Billy divided them into groups of 2 tops.
Now he has ▒ groups of 2 tops.

B



8 divided into groups of 2 makes ▒ groups.
8 divided into twos means 8 divided by 2.
8 divided by 2 = ▒
Divide 8 by 2.

A Divide 8 by 2.
B Divide 4 by 2.
C Divide 6 by 3.
D Divide 8 by 4.
E Divide 6 by 2.



A Don had 8 spools in a box.
He gave Billy 2 of the spools.
Then Don had ▒ spools in the box.

B Ellen had 8 spools in a box.
She put them in groups of 2 each.
Then she had ▒ groups of 2 spools.

C Carol put 2 groups of spools into a box.
There were 4 spools in each group.
Then she had ▒ spools in the box.

D Tom had 7 spools in a box.
He put 1 more spool in the box.
Then he had ▒ spools in the box.

A Multiply 4 by 2.
B Add 2 to 5.
C Divide 6 by 2.
D 8 minus 5 equals ▒.
E 4 times 2 = ▒
F 8 divided by 4 equals ▒.
G Subtract 2 from 8.
H 3 times 2 = ▒
I Divide 8 by 2.
J 4 plus 4 equals ▒.
K Add 1 to 7.
L Multiply 3 by 2.
M Divide 8 by 4.
N Subtract 6 from 8.
O Multiply 2 by 4.
P 8 minus 3 equals ▒.

On pages 21 to 25 you have learned how to add and multiply to make 8. You have also learned how to subtract from 8 and how to divide 8.

Moving forward

On pages 26 to 29 you will learn how to add and multiply to make 9. You will also learn how to subtract from 9 and how to divide 9.

A 5 balls plus 4 balls equal ▒ balls.

Add 4 to 5. $5+4=\square$

B 8 cars plus 1 car equal ▒ cars.

Add 1 to 8. $8+1=\square$

C 3 boats plus 6 boats equal ▒ boats.

Add 6 to 3. $3+6=\square$

D 4 whistles plus 5 whistles equal ▒ whistles.

Add 5 to 4. $4+5=\square$

E 2 airplanes plus 7 airplanes equal ▒ airplanes.

Add 7 to 2. $2+7=\square$

F 6 books plus 3 books equal ▒ books.

Add 3 to 6. $6+3=\square$

A 9 horns minus 4 horns equal ▒ horns.

Subtract 4 from 9.
9 − 4 = ▒

B 9 bells minus 8 bells equal ▒ bell.

Subtract 8 from 9.
9 − 8 = ▒

C 9 cars minus 6 cars equal ▒ cars.

Subtract 6 from 9.
9 − 6 = ▒

D 9 whistles minus 2 whistles equal ▒ whistles.

Subtract 2 from 9.
9 − 2 = ▒

E 9 banks minus 5 banks equal ▒ banks.

Subtract 5 from 9.
9 − 5 = ▒

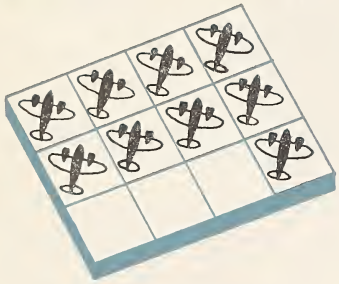
F 9 balls minus 7 balls equal ▒ balls.

Subtract 7 from 9.
9 − 7 = ▒

A

How many groups of airplanes are on the table?
How many airplanes are in each group?
Billy put the airplanes into a box.
Now how many airplanes are in the box?

3 groups of 3 = ▒ 3 threes = ▒
3 multiplied by 3 = ▒
3 times 3 = ▒ $3 \times 3 = 9$



A 2 times 4 = ▒ $2 \times 4 =$ ▒
B 3 times 2 = ▒ $3 \times 2 =$ ▒
C 4 times 2 = ▒ $4 \times 2 =$ ▒
D 2 times 2 = ▒ $2 \times 2 =$ ▒
E 2 times 3 = ▒ $2 \times 3 =$ ▒
F 3 times 3 = ▒ $3 \times 3 =$ ▒

B

How many cars are in the box?
Tom divided them into groups of 3 cars.
Now he has ▒ groups of 3 cars.

9 divided into groups of 3 makes ▒ groups.
9 divided by 3 = ▒ $9 \div 3 = 3$

A 6 divided by 3 = ▒ $6 \div 3 =$ ▒
B 8 divided by 2 = ▒ $8 \div 2 =$ ▒
C 4 divided by 2 = ▒ $4 \div 2 =$ ▒
D 8 divided by 4 = ▒ $8 \div 4 =$ ▒
E 9 divided by 3 = ▒ $9 \div 3 =$ ▒
F 6 divided by 2 = ▒ $6 \div 2 =$ ▒

A There was 1 bell on the shelf.
Betty put 8 more bells on the shelf.
Then there were ▒ bells
on the shelf.

B There were 9 horns in a store.
Nancy bought 3 of the horns.
Then there were ▒ horns
in the store.

C Tom had 9 tops in a box.
He gave Billy 1 of the tops.
Then there were ▒ tops in the box.

D Don had 7 little cars.
Jack gave him 2 more cars.
Then Don had ▒ cars.

A $9 \div 3 =$ ▒
B $2 + 7 =$ ▒
C Add 6 to 2.
D 9 minus 6 = ▒
E $3 \times 3 =$ ▒
F Subtract 1 from 9.
G $7 + 2 =$ ▒
H 9 minus 5 equals ▒.
I Add 4 to 3.
J Multiply 4 by 2.
K Subtract 4 from 9.
L 3 plus 6 equals ▒.
M $9 - 3 =$ ▒
N 2 times 3 = ▒
O Add 5 to 4.
P $9 - 2 =$ ▒
Q 6 plus 3 equals ▒.
R Divide 8 by 4.

Now you have learned how to add and multiply to make 9. You have also learned how to subtract from 9 and how to divide 9.

Moving forward

On pages 30 to 34 you will learn how to add and multiply to make 10. You will also learn how to subtract from 10 and how to divide 10.

A 2 boxes plus 8 boxes equal ▒ boxes.

Add 8 to 2. $2+8=$▒

B 5 bags plus 5 bags equal ▒ bags.

Add 5 to 5. $5+5=$▒

C 4 apples plus 6 apples equal ▒ apples.

Add 6 to 4. $4+6=$▒

D 7 spoons plus 3 spoons equal ▒ spoons.

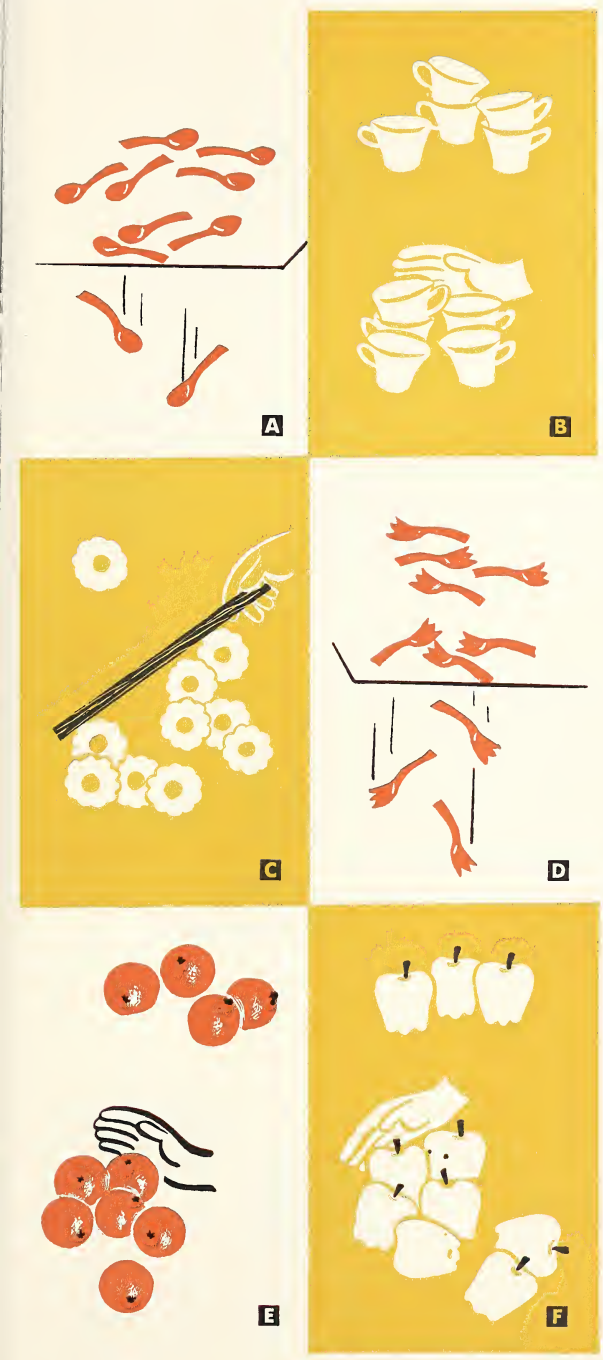
Add 3 to 7. $7+3=$▒

E 1 cup plus 9 cups equals ▒ cups.

Add 9 to 1. $1+9=$▒

F 6 forks plus 4 forks equal ▒ forks.

Add 4 to 6. $6+4=$▒



A 10 spoons minus 2 spoons equal ▒ spoons.

Subtract 2 from 10.
10 − 2 = ▒

B 10 cups minus 5 cups equal ▒ cups.

Subtract 5 from 10.
10 − 5 = ▒

C 10 cookies minus 9 cookies equal ▒ cooky.

Subtract 9 from 10.
10 − 9 = ▒

D 10 forks minus 3 forks equal ▒ forks.

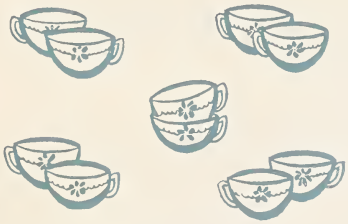
Subtract 3 from 10.
10 − 3 = ▒

E 10 oranges minus 6 oranges equal ▒ oranges.

Subtract 6 from 10.
10 − 6 = ▒

F 10 apples minus 7 apples equal ▒ apples.

Subtract 7 from 10.
10 − 7 = ▒



How many groups of cups are on the table?
How many cups are in each group?
Betty put the cups on a tray.
How many cups are on the tray?

5 groups of 2 = ▒

5 twos = ▒ 2 multiplied by 5 = ▒

5 times 2 = ▒ 5 × 2 = ▒

Multiply 2 by 5.

Multiply

$$\begin{array}{r} 2 \\ 5 \\ \hline \square \end{array}$$

A

$$\begin{array}{r} 2 \\ 5 \\ \hline 10 \end{array}$$

$5 \times 2 = 10$

How many groups of cups are on the table?
How many cups are in each group?
Mother put the cups on a tray.
Now how many cups are on the tray?

2 groups of 5 = ▒

2 fives = ▒ 5 multiplied by 2 = ▒

2 times 5 = ▒ 2 × 5 = ▒

Multiply 5 by 2.

Multiply

$$\begin{array}{r} 5 \\ 2 \\ \hline \square \end{array}$$

B

$$\begin{array}{r} 5 \\ 2 \\ \hline \square \end{array}$$

$2 \times 5 =$ ▒

Multiply

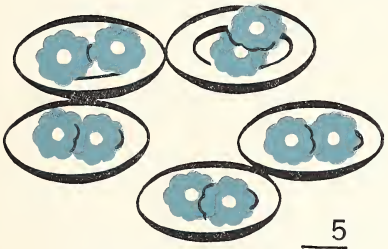
A	B	C	D	E	F	G
2	3	5	4	3	2	2
3	3	2	2	2	2	4
▒	▒	▒	▒	▒	▒	▒

How many cookies did Carol put on the big plate?
She divided them into groups of 2 cookies.
Then she had ▒ groups of 2 cookies.

10 divided into groups of 2 makes ▒ groups.
10 divided by 2 = ▒
10 ÷ 2 = ▒
Divide 10 by 2.

$$2\overline{)10}^{\square}$$

C



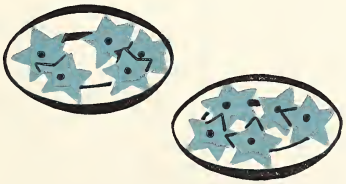
$10 \div 2 = 5$ $\qquad 2\overline{)10}^{5}$

How many cookies did June put on the big plate?
She divided them into groups of 5 cookies.
Then she had ▒ groups of 5 cookies.

10 divided into groups of 5 makes ▒ groups.
10 divided by 5 = ▒
10 ÷ 5 = ▒
Divide 10 by 5.

$$5\overline{)10}^{\square}$$

D



$10 \div 5 = \square$ $\qquad 5\overline{)10}^{\square}$

A $2\overline{)6}^{\square}$ **B** $3\overline{)9}^{\square}$ **C** $2\overline{)8}^{\square}$ **D** $3\overline{)6}^{\square}$

E $4\overline{)8}^{\square}$ **F** $5\overline{)10}^{\square}$ **G** $2\overline{)4}^{\square}$ **H** $2\overline{)10}^{\square}$

A $10 \div 5 = \square$
B $6 \div 2 = \square$
C $8 \div 4 = \square$
D $10 \div 2 = \square$
E $6 \div 3 = \square$
F $8 \div 2 = \square$

A 9 plus 1 = ▭
B 10 minus 8 = ▭
C 3 plus 7 = ▭
D 10 minus 4 = ▭
E 8 plus 2 = ▭
F 10 minus 1 = ▭

A Add 2 to 7.
B 5 × 2 = ▭
C 10 − 6 = ▭
D 3 times 2 = ▭
E Divide 10 by 5.
F 2 + 8 = ▭
G 10 ÷ 2 = ▭
H 10 minus 3 = ▭
I Multiply 5 by 2.
J Add 2 to 8.

Multiply

A	B	C	D
2	5	3	2
4	2	3	5
▭	▭	▭	▭

Divide

E	F	G	H
▭	▭	▭	▭
5)10	3)6	2)10	4)8

Now you should know how to add and multiply to make 10. You should also know how to subtract from 10 and how to divide 10.

Keeping skillful

Add

A	B	C	D	E
8	2	6	3	3
2	7	4	5	7
▒	▒	▒	▒	▒

Subtract

A	B	C	D	E
10	7	9	10	9
8	2	6	4	2
▒	▒	▒	▒	▒

Multiply

A	B	C	D	E
2	3	4	2	2
5	3	2	2	4
▒	▒	▒	▒	▒

Divide

A	B	C	D
▒	▒	▒	▒
$2\overline{)6}$	$5\overline{)10}$	$3\overline{)9}$	$2\overline{)8}$

E	F	G	H
▒	▒	▒	▒
$2\overline{)4}$	$3\overline{)6}$	$2\overline{)10}$	$4\overline{)8}$

A Add 3 to 4.
B 2 times 4 = ▒
C 7 minus 5 = ▒
D Divide 9 by 3.
E 10 − 7 = ▒
F 6 divided by 2 = ▒
G 5 plus 4 = ▒
H 2 multiplied by 3 = ▒
I 10 ÷ 5 = ▒
J Subtract 6 from 10.
K 3 + 2 = ▒
L Multiply 5 by 2.
M Subtract 5 from 10.
N Multiply 3 by 2.
O Subtract 2 from 10.
P Divide 8 by 4.
Q Add 3 to 6.
R Multiply 2 by 5.

Checking up

Test 1

A 5+2=
B 3+3=
C 1+4=
D 2+1=
E 2+4=
F 3+1=
G 1+1=
H 3+4=
I 6+1=
J 5+1=
K 3+2=
L 2+2=
M 1+6=
N 4+1=
O 2+5=
P 4+2=
Q 1+3=
R 2+3=
S 1+5=
T 4+3=
U 1+2=

Test 2

A 5+3=
B 8+2=
C 4+4=
D 3+6=
E 7+1=
F 5+5=
G 9+1=
H 2+6=
I 3+7=
J 1+8=
K 4+6=
L 7+2=
M 3+5=
N 1+9=
O 6+2=
P 4+5=
Q 7+3=
R 8+1=
S 6+3=
T 2+8=
U 5+4=
V 1+7=
W 6+4=
X 2+7=

Test 3

A 7−2=
B 3−2=
C 6−1=
D 5−3=
E 7−5=
F 4−2=
G 6−4=
H 7−3=
I 7−6=
J 4−3=
K 5−2=
L 3−1=
M 6−2=
N 5−4=
O 6−3=
P 7−1=
Q 6−5=
R 5−1=
S 7−4=
T 4−1=

Test 4

A 10−4=
B 8−5=
C 9−2=
D 10−1=
E 9−8=
F 8−6=
G 9−3=
H 8−7=
I 9−5=
J 8−4=
K 10−6=
L 9−1=
M 8−3=
N 10−2=
O 9−7=
P 10−5=
Q 9−6=
R 10−8=
S 8−2=
T 10−3=
U 9−4=
V 10−7=
W 8−1=
X 10−9=

Test 5

A 2×4=
B 3×3=
C 3×2=
D 2×2=
E 5×2=
F 2×3=
G 4×2=
H 2×5=
I 3×3=

Test 6

A 8÷4=
B 6÷2=
C 9÷3=
D 10÷5=
E 4÷2=
F 8÷2=
G 10÷2=
H 6÷3=
I 8÷4=
J 9÷3=

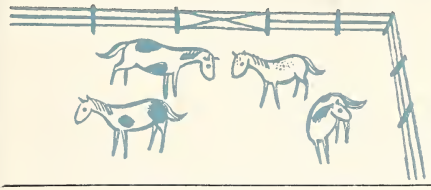
Test 7

A 4+6=
B 6÷3=
C 9−7=
D 4×2=
E 10÷2=
F 7−5=
G 5+4=
H 3+7=
I 8÷4=
J 10−7=
K 3+6=
L 9÷3=
M 8−5=
N 2×3=
O 2−1=
P 5+5=
Q 2×5=
R 7+2=
S 2×2=

Test 8

A 4÷2=
B 10−6=
C 9−4=
D 3×3=
E 2+4=
F 7−2=
G 5×2=
H 6−2=
I 3+5=
J 10÷5=
K 8÷2=
L 4+3=
M 2+8=
N 6÷2=
O 2+5=
P 4+4=
Q 3×2=
R 5−3=
S 2×4=

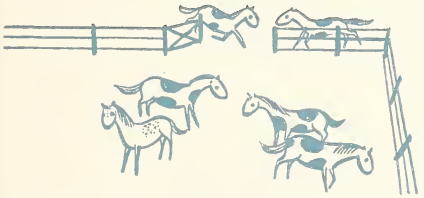
Exploring problems



4 ponies are in the barnyard.

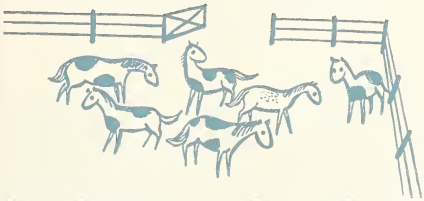
A

4



2 more ponies are coming to the barnyard.

4 + 2



Now how many ponies are in the barnyard?

4 + 2 = ☐

8 lambs are playing.

B

8

5 of the lambs are going away.

8 − 5

Now how many lambs are playing?

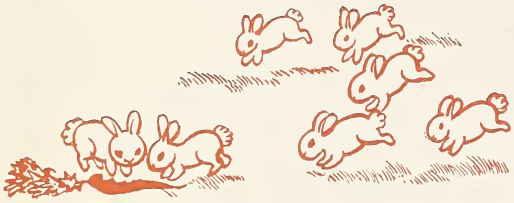
8 − 5 = ☐

C

3 squirrels are eating.
2 squirrels are running to eat.
Then ▢ squirrels will be eating.
3 ~~ 2 = ▢

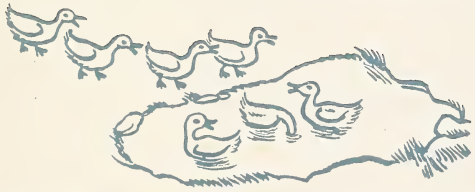
D

7 dogs were playing.
4 of the dogs are going away.
Now ▢ dogs are playing.
7 ~~ ▢ = ▢



E

2 rabbits are eating.
5 rabbits are coming to eat.
Then ▢ rabbits will be eating.
▢ ~~ ▢ = ▢



F

3 ducks are in the pond.
4 ducks are coming to the pond.
Then ▢ ducks will be in the pond.
▢ ~~ ▢ = ▢

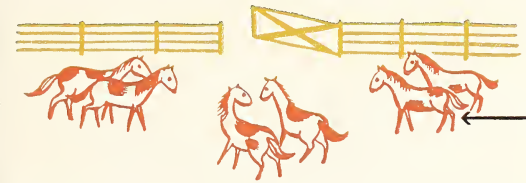
G

7 kittens were sleeping.
2 of the kittens are going away.
Now ▢ kittens are sleeping.
▢ ~~ ▢ = ▢

H

6 pigs were eating.
4 of the pigs are going away.
Now ▢ pigs are eating.
▢ ~~ ▢ = ▢

A 3 groups of ponies are eating.
There are 2 ponies in each group.

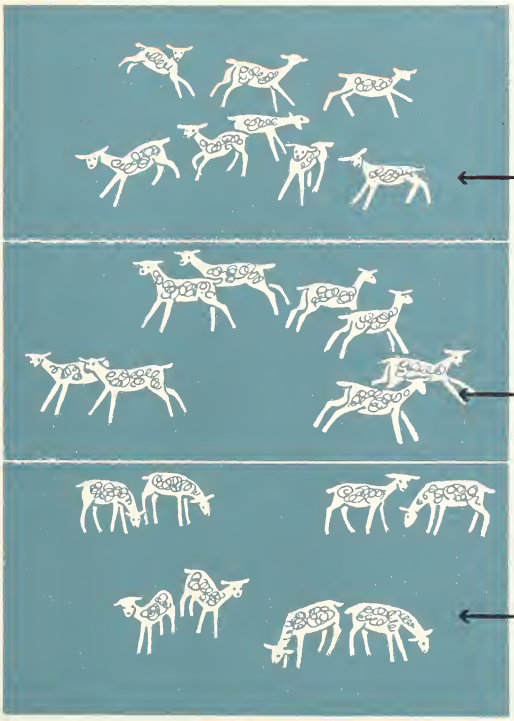


The 3 groups of 2 ponies are going to the barnyard.

3×2

How many ponies are in the barnyard now?

$3 \times 2 =$ ▒



B 8 lambs are playing.

8

Now they are going away in groups of 2.

$8 \div 2$

There are how many groups of 2?

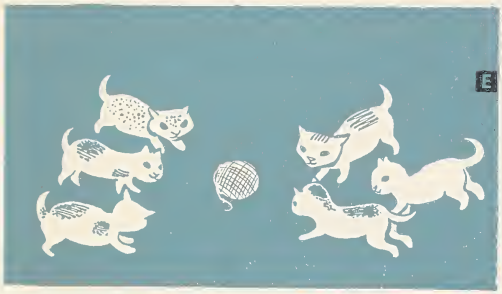
$8 \div 2 =$ ▒

C

3 groups of rabbits are going to eat.
3 rabbits are in each group.
Then ▒ rabbits will be eating.
3 ~~ 3 = ▒

D

6 ducks were in the pond.
Now they are going away in groups of 2.
There are ▒ groups of 2 ducks.
6 ~~ ▒ = ▒



E

2 groups of kittens are going to play.
3 kittens are in each group.
Then ▒ kittens will be playing.
▒ ~~ ▒ = ▒

F

4 groups of squirrels are running to the tree.
2 squirrels are in each group.
Then ▒ squirrels will be in the tree.
▒ ~~ ▒ = ▒

G

9 chickens were eating.
Now they are going away in groups of 3.
There are ▒ groups of 3 chickens.
▒ ~~ ▒ = ▒

A Jack had 8 blocks.
He separated them into groups of 4 blocks.
Then he had how many groups of blocks?
8 ~~~ 4 = ▒

B 1 child was playing.
5 more children came to play.
How many children were playing then?
1 ~~~ 5 = ▒

C 6 dolls were in the dollhouse.
Nancy took 4 of the dolls from the dollhouse.
Then how many dolls were left in the dollhouse?
6 ~~~ 4 = ▒

D Billy put 4 groups of cars into a box.
There were 2 cars in each group.
How many cars were in the box?
4 ~~~ 2 = ▒

E 3 cows were in the barnyard.
2 more cows came into the barnyard.
Then how many cows were in the barnyard?
3 ~~~ 2 = ▒

F Betty painted 4 pictures.
She gave 2 pictures to Mother.
Betty had how many pictures left?

G Carol had 2 groups of toy kittens.
There were 5 kittens in each group.
She put all the kittens in a basket.
How many kittens were in the basket?

H 6 turtles were in a pond.
4 more turtles came into the pond.
Then there were how many turtles in the pond?

I 8 birds were on a tree.
They flew away in groups of 4.
How many groups of birds flew away?

J Tom had 7 toy boats.
He gave Don 2 of the boats.
Then Tom had how many boats?

K Nancy had 3 groups of toy cows.
There were 2 cows in each group.
She put them all in a barn.
How many cows did she put in the barn?

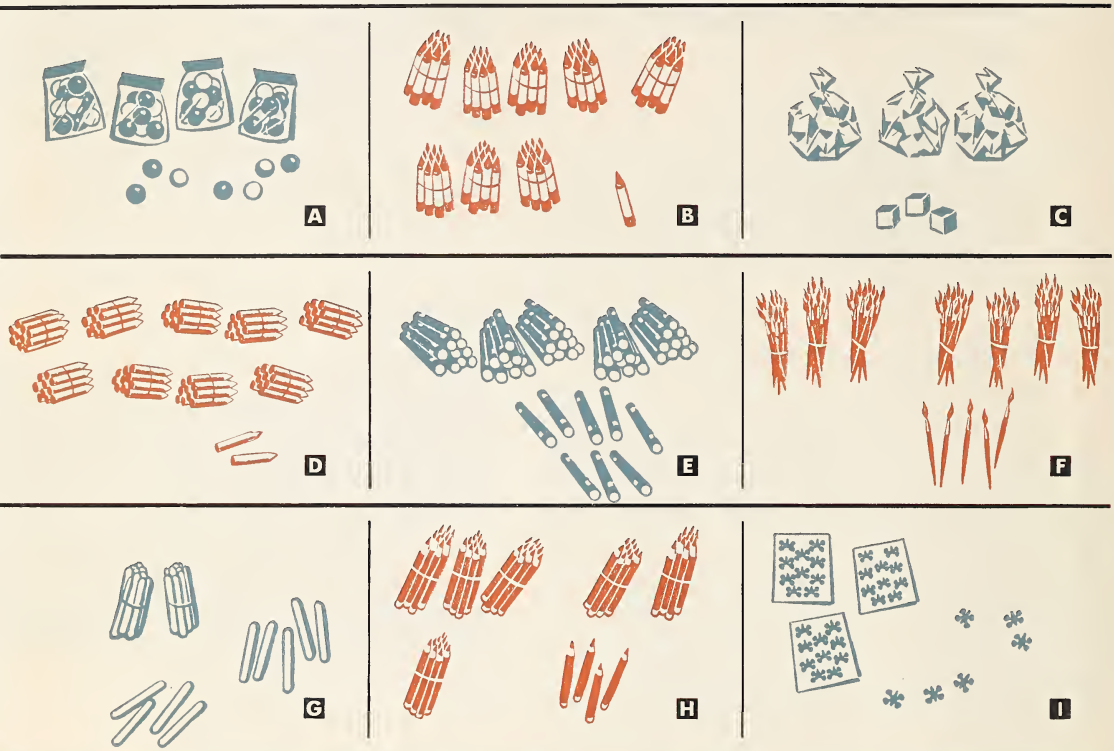
L 9 balls were on a shelf.
Carol took 3 balls from the shelf.
Then how many balls were on the shelf?

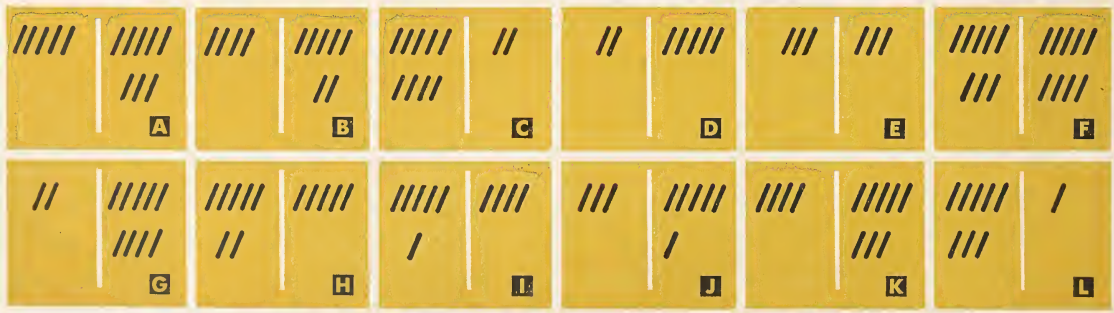
M 10 children were playing.
They separated into groups of 5.
There were how many groups of children?

From now on you can write with numbers and signs what a problem means.

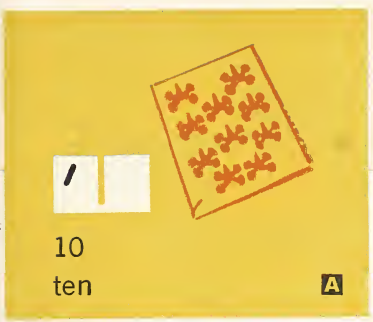
Moving forward

On pages 42 to 45 you will learn to read and write numerals with two figures in them.

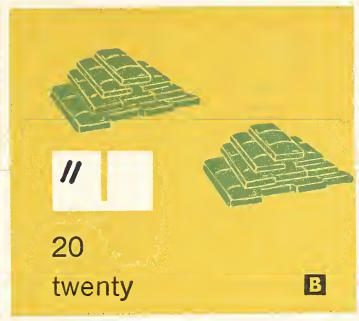




A	B	C	D	E	F	G	H	I	J	K	L	M	N
58	75	25	47	64	81	89	36	56	33	48	29	63	92



10
ten **A**



20
twenty **B**

30
thirty **C**

40
forty **D**

50
fifty **E**

60
sixty **F**

70
seventy **G**

80
eighty **H**

90
ninety **I**

A ten twenty ~~ forty fifty ~~ seventy ~~ ninety
B ~~ thirty forty ~~ ~~ seventy eighty ~~
C ten ~~ thirty forty ~~ sixty ~~ ~~ ninety
D forty ~~ ~~ seventy ~~ ninety
E thirty forty ~~ sixty ~~ eighty ~~
F twenty ~~ ~~ fifty ~~ seventy eighty ~~
G ~~ ~~ thirty forty ~~ sixty ~~ eighty ~~

A fifty **B** seventy **C** ninety **D** twenty **E** forty
F eighty **G** ten **H** sixty **I** thirty

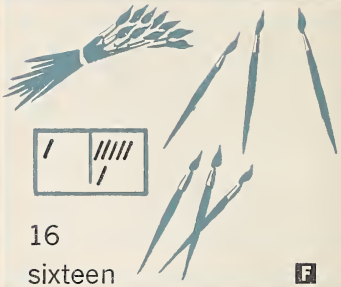
11
eleven A

12
twelve B

13
thirteen C

14
fourteen D

15
fifteen E



16
sixteen F

17
seventeen G

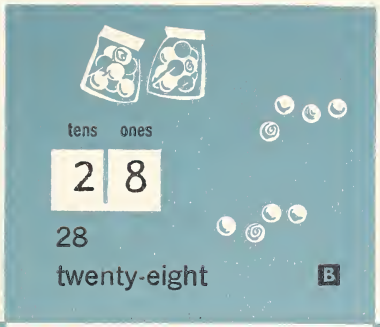
18
eighteen H

19
nineteen I

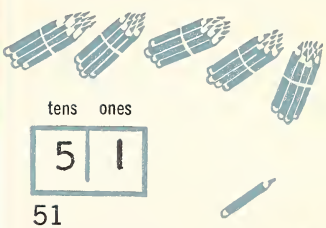
A ten ~~ twelve ~~ fourteen ~~ sixteen
B fourteen fifteen ~~ seventeen ~~ nineteen
C twelve ~~ fourteen ~~ sixteen seventeen ~~ ~~
D eleven ~~ ~~ fourteen ~~ ~~ seventeen eighteen ~~
E thirteen fourteen ~~ sixteen ~~ ~~ nineteen
F fifteen ~~ ~~ eighteen ~~
G twelve thirteen ~~ fifteen ~~ seventeen ~~ ~~

A eighteen B eleven C twelve D nineteen E thirteen
F sixteen G fourteen H seventeen I fifteen

34
thirty-four **A**



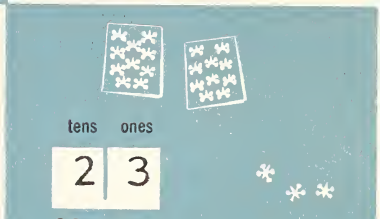
28
twenty-eight **B**



51
fifty-one **C**

46
forty-six **D**

62
sixty-two **E**



23
twenty-three **F**

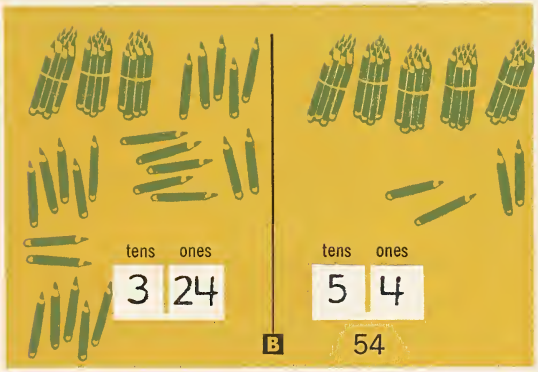
A 8 tens 4 ones = ▒
B 1 ten 9 ones = ▒
C 5 tens 7 ones = ▒
D 3 tens 6 ones = ▒
E 8 tens 9 ones = ▒
F 2 tens 2 ones = ▒
G 6 tens 8 ones = ▒
H 9 tens 5 ones = ▒
I 4 tens 1 one = ▒
J 7 tens 6 ones = ▒
K 5 tens 3 ones = ▒
L 1 ten 1 one = ▒
M 6 tens 3 ones = ▒
N 7 tens 2 ones = ▒
O 9 tens 9 ones = ▒

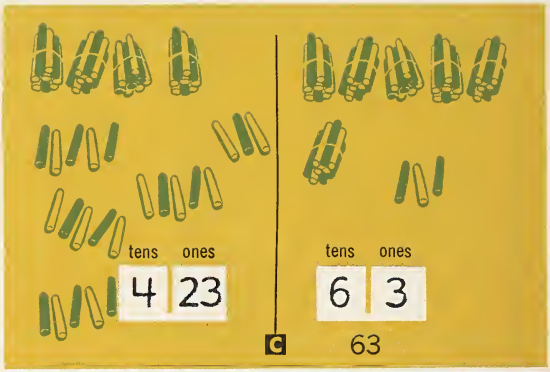
A thirty-one = 3 tens ▒ one
B eighty-three = ▒ tens 3 ones
C sixty-two = ▒ tens ▒ ones
D fifty-four = ▒ tens ▒ ones
E ninety-six = ▒ tens ▒ ones
F twenty-seven = ▒ tens ▒ ones
G seventy-nine = ▒ tens ▒ ones
H forty-eight = ▒ tens ▒ ones
I eighty-five = ▒ tens ▒ ones
J twenty-six = ▒ tens ▒ ones
K seventy-two = ▒ tens ▒ ones
L thirty-seven = ▒ tens ▒ ones
M sixty-eight = ▒ tens ▒ ones
N eighteen = ▒ ten ▒ ones
O fifty-two = ▒ tens ▒ ones

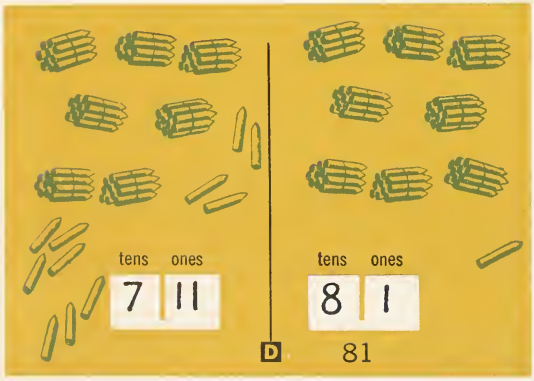
Now you should know how to read and write the numerals from 1 to 99.

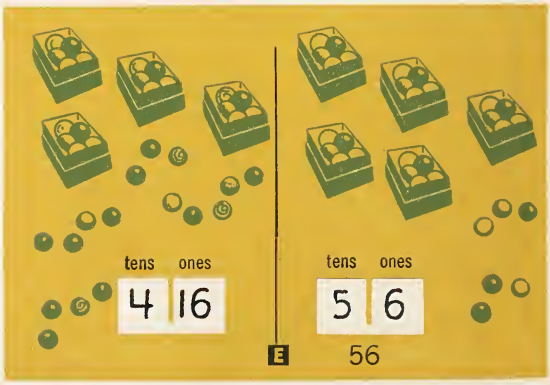
Moving forward

On pages 46 to 49 you will learn more about numerals with two figures and what they mean.







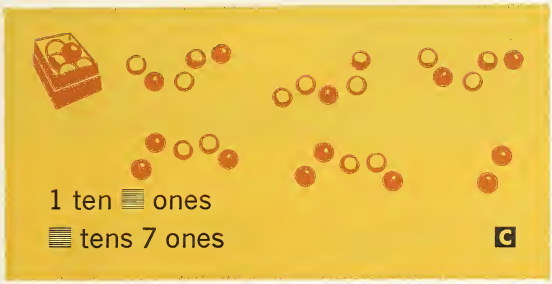


2 tens ▭ ones
▭ tens 6 ones

A

3 tens ▭ ones
▭ tens 2 ones

B



1 ten ▭ ones
▭ tens 7 ones

C

8 tens ▭ ones
▭ tens 4 ones

D

A 8 tens 12 ones
9 tens ▭ ones

B 5 tens 14 ones
▭ tens ▭ ones

C 7 tens 15 ones
▭ tens ▭ ones

D 4 tens 12 ones
▭ tens ▭ ones

E 7 tens 24 ones
▭ tens ▭ ones

F 1 ten 26 ones
▭ tens ▭ ones

G 6 tens 17 ones
▭ tens ▭ ones

H 4 tens 14 ones
▭ tens ▭ ones

I 2 tens 29 ones
▭ tens ▭ ones

J 5 tens 16 ones
▭ tens ▭ ones

K 1 ten 38 ones
▭ tens ▭ ones

L 1 ten 13 ones
▭ tens ▭ ones

M 2 tens 25 ones
▭ tens ▭ ones

N 8 tens 16 ones
▭ tens ▭ ones

O 3 tens 33 ones
▭ tens ▭ ones

P 1 ten 19 ones
▭ tens ▭ ones

Q 3 tens 27 ones
▭ tens ▭ ones

R 8 tens 14 ones
▭ tens ▭ ones

S 4 tens 35 ones
▭ tens ▭ ones

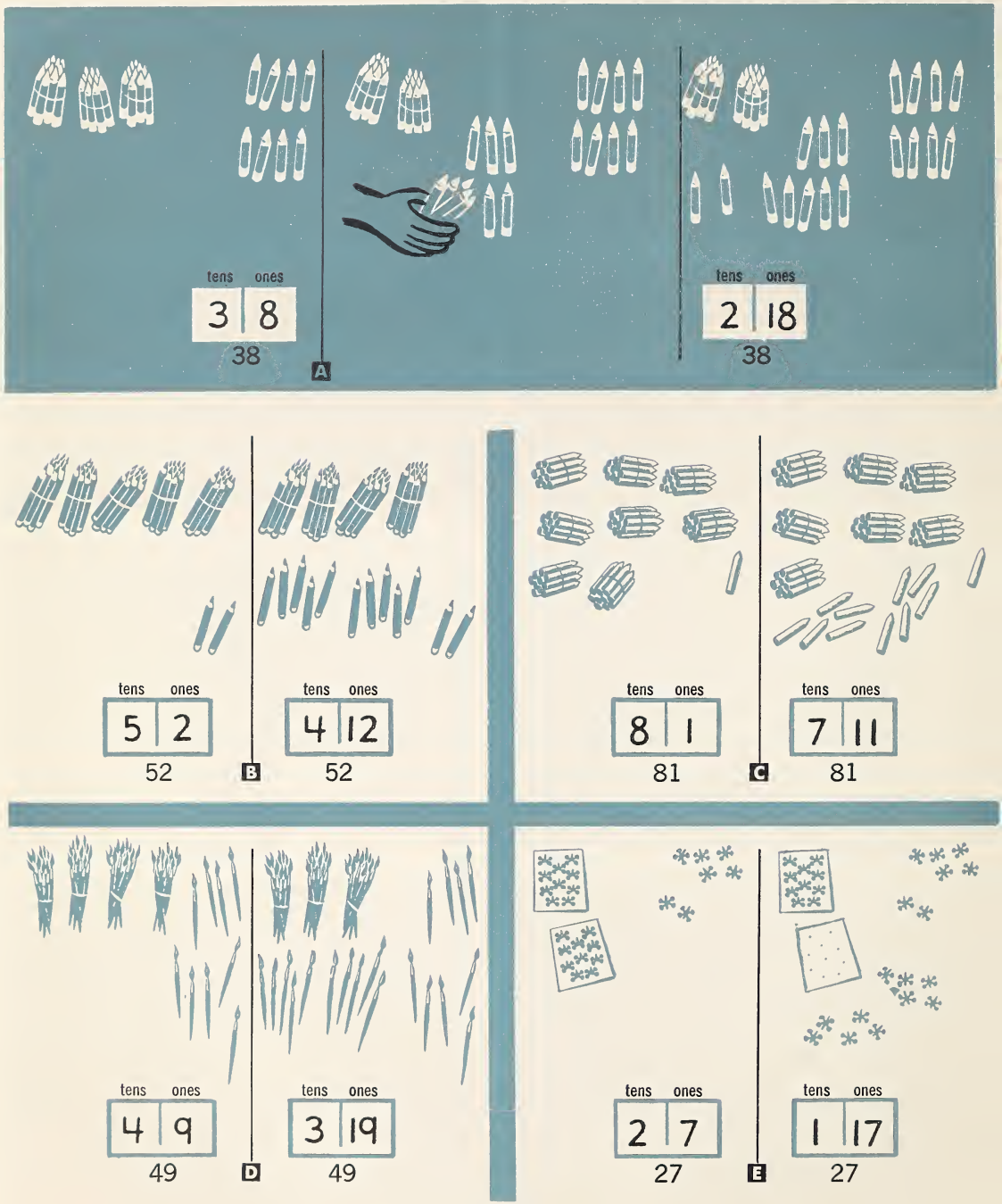
T 6 tens 19 ones
▭ tens ▭ ones

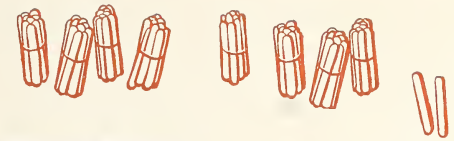
U 2 tens 12 ones
▭ tens ▭ ones

V 5 tens 35 ones
▭ tens ▭ ones

W 7 tens 18 ones
▭ tens ▭ ones

X 2 tens 32 ones
▭ tens ▭ ones


tens ones
3 8
38
A
tens ones
2 18
38
tens ones
5 2
52
B
tens ones
4 12
52
tens ones
8 1
81
C
tens ones
7 11
81
tens ones
4 9
49
D
tens ones
3 19
49
tens ones
2 7
27
E
tens ones
1 17
27



__ tens __ ones
7 tens __ ones **A**

__ tens __ ones
3 tens __ ones **B**

__ tens __ ones
1 ten __ ones **C**

__ tens __ ones
4 tens __ ones **D**

A 34 = 3 tens __ ones
2 tens __ ones

B 65 = __ tens 5 ones
__ tens 15 ones

C 46 = __ tens __ ones
__ tens __ ones

D 33 = __ tens __ ones
__ tens __ ones

E 28 = __ tens __ ones
__ ten __ ones

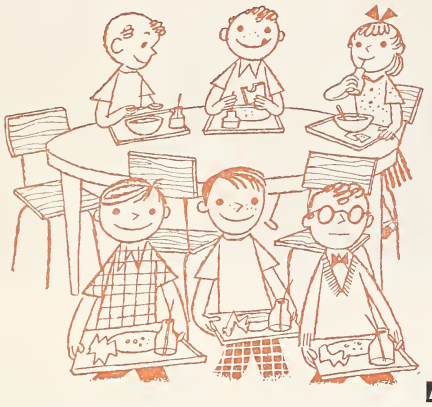
F 49 = __ tens __ ones
__ tens __ ones

G 24 = __ tens __ ones
__ ten __ ones

A 67 = 5 tens __ ones
B 39 = __ tens __ ones
C 88 = __ tens __ ones
D 57 = __ tens __ ones
E 96 = __ tens __ ones
F 53 = __ tens __ ones
G 64 = __ tens __ ones
H 75 = __ tens __ ones
I 92 = __ tens __ ones
J 85 = __ tens __ ones
K 77 = __ tens __ ones
L 23 = __ ten __ ones
M 59 = __ tens __ ones
N 72 = __ tens __ ones
O 99 = __ tens __ ones
P 42 = __ tens __ ones
Q 84 = __ tens __ ones

Now you should understand the meaning of numerals that have two figures in them.

Using arithmetic



A

B

A Look at Picture A.
How many children are left at the table?
6 ~~ 3 = ▒

B Look at Picture B.
How many children will there be at the table?
3 ~~ 2 = ▒

C Bill put 10 balls into groups.
He put 5 balls in each group.
How many groups did he make?
10 ~~ 5 = ▒

D Ellen put 4 groups of horns on the shelf.
There were 2 horns in each group.
How many horns were on the shelf then?
4 ~~ 2 = ▒

E 8 cookies were on a plate.
The children ate 6 of them.
How many cookies were left?
8 ~~ 6 = ▒

F Ellen put 9 spools into groups.
She put 3 spools in each group.
How many groups did she make?
9 ~~ 3 = ▒

G Carol had 7 pictures.
She gave 2 of them to Ellen.
Carol had how many pictures then?
7 ~~ 2 = ▒

H Don had 7 pennies in a bank.
Mother gave him 3 more pennies to put in it.
Then Don had how many pennies in the bank?
7 ~~ 3 = ▒

I Jack put 3 groups of whistles on the table.
There were 2 whistles in each group.
Then how many whistles were on the table?

J Tom had 10 toy firemen.
He gave 4 of his toy firemen to Don.
Then Tom had how many firemen?

K Bill had 3 toy policemen.
Don gave him 3 more policemen.
Then Bill had how many policemen?

L Ellen put 6 cookies into groups.
She put 3 cookies in each group.
How many groups did she make?

M Carol had 7 spoons.
Ellen gave her 2 more spoons.
How many spoons did Carol have then?

N June put 4 groups of oranges on the table.
There were 2 oranges in each group.
Then how many oranges were on the table?

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Keeping skillful

A 44 = 3 tens ▭ ones
B 29 = ▭ ten ▭ ones
C 56 = ▭ tens ▭ ones
D 97 = ▭ tens ▭ ones
E 31 = ▭ tens ▭ ones
F 75 = ▭ tens ▭ ones
G 82 = ▭ tens ▭ ones
H 63 = ▭ tens ▭ ones
I 94 = ▭ tens ▭ ones
J 71 = ▭ tens ▭ ones
K 84 = ▭ tens ▭ ones
L 23 = ▭ ten ▭ ones
M 58 = ▭ tens ▭ ones
N 36 = ▭ tens ▭ ones
O 60 = ▭ tens ▭ ones
P 49 = ▭ tens ▭ ones

A 1 ten 27 ones =
3 tens ▭ ones

B 4 tens 18 ones =
▭ tens ▭ ones

C 6 tens 35 ones =
▭ tens ▭ ones

D 2 tens 19 ones =
▭ tens ▭ ones

E 5 tens 22 ones =
▭ tens ▭ ones

F 3 tens 38 ones =
▭ tens ▭ ones

G 5 tens 11 ones =
▭ tens ▭ one

H 7 tens 29 ones =
▭ tens ▭ ones

A 3 + 7 = ▭
B 10 ÷ 2 = ▭
C 9 − 4 = ▭
D 5 + 3 = ▭
E 8 ÷ 4 = ▭
F 3 × 2 = ▭
G 7 − 5 = ▭
H 3 × 3 = ▭
I 10 − 7 = ▭
J 2 × 5 = ▭
K 7 − 3 = ▭
L 10 ÷ 5 = ▭
M 6 ÷ 2 = ▭
N 2 + 6 = ▭
O 5 + 5 = ▭
P 8 ÷ 2 = ▭
Q 6 ÷ 3 = ▭
R 7 + 2 = ▭
S 9 − 3 = ▭
T 8 − 5 = ▭
U 5 × 2 = ▭

Moving forward

On pages 52 to 55 you will learn about coins. You will learn about the penny, the nickel, the dime, the quarter, and the half dollar.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
16	17	18	19	20	21	22	23	24	25	26	27			
28	29	30	31	32	33	34	35	36	37	38	39			
40	41	42	43	44	45	46	47	48	49	50				

A

D

B

E

F

nickel

5 cents

5¢

C

G

dime

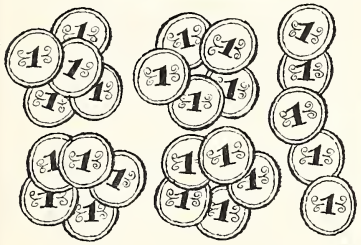
10 cents

10¢

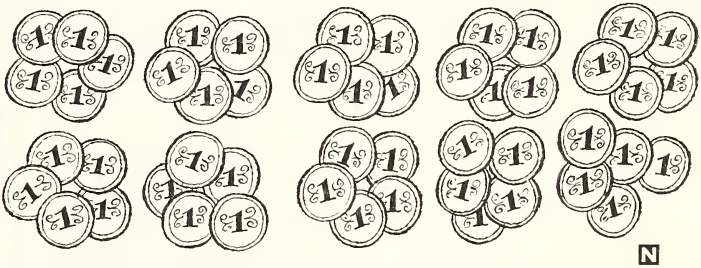
H

I

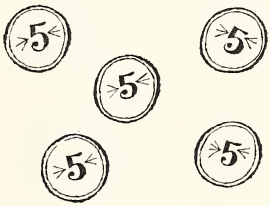
M



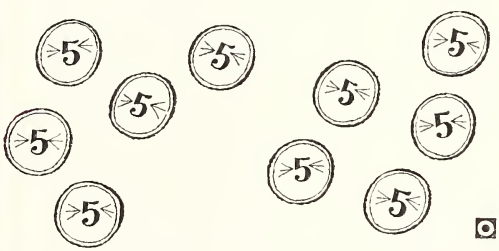
J



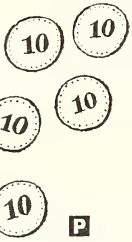
N



K



O

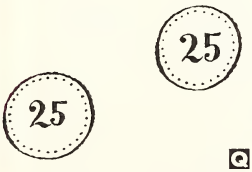


P

quarter

25 cents
25¢

L

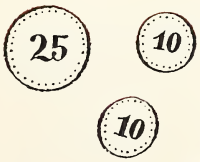


Q

half
dollar

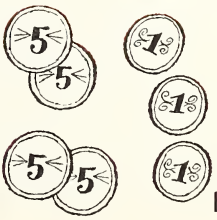
50 cents
50¢

R

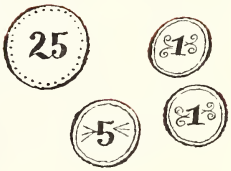


S

T



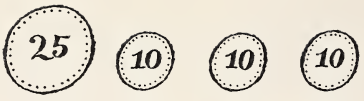
U



V

25 50 75

75¢ **A**

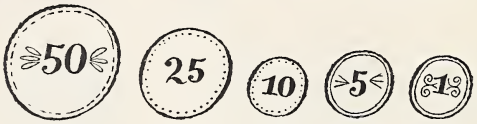


25 35 45 55

55¢ **C**

50 75 85 86

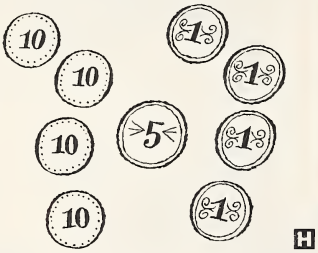
86¢ **B**



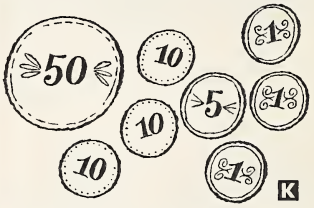
50 75 85 90 91

91¢ **D**

E



H



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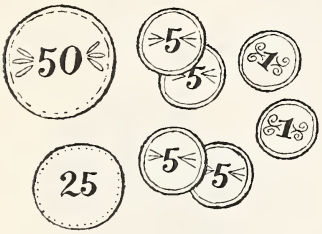

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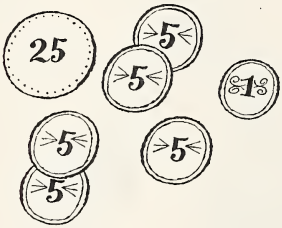
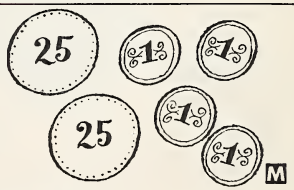


I

L

G

J



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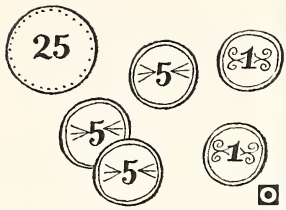
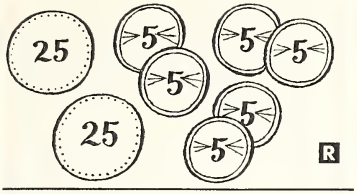
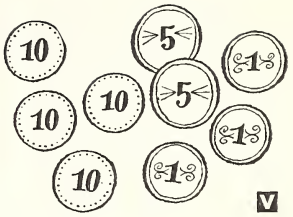
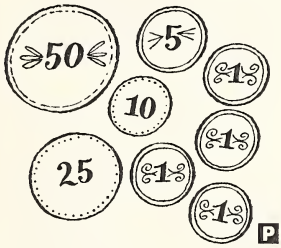
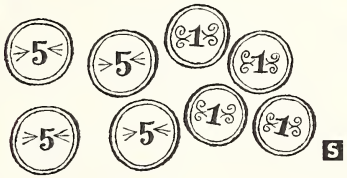
N

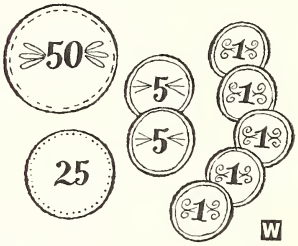


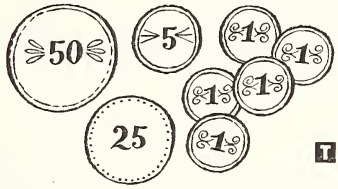


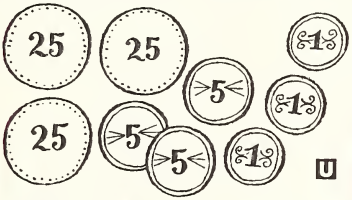


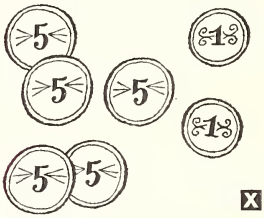










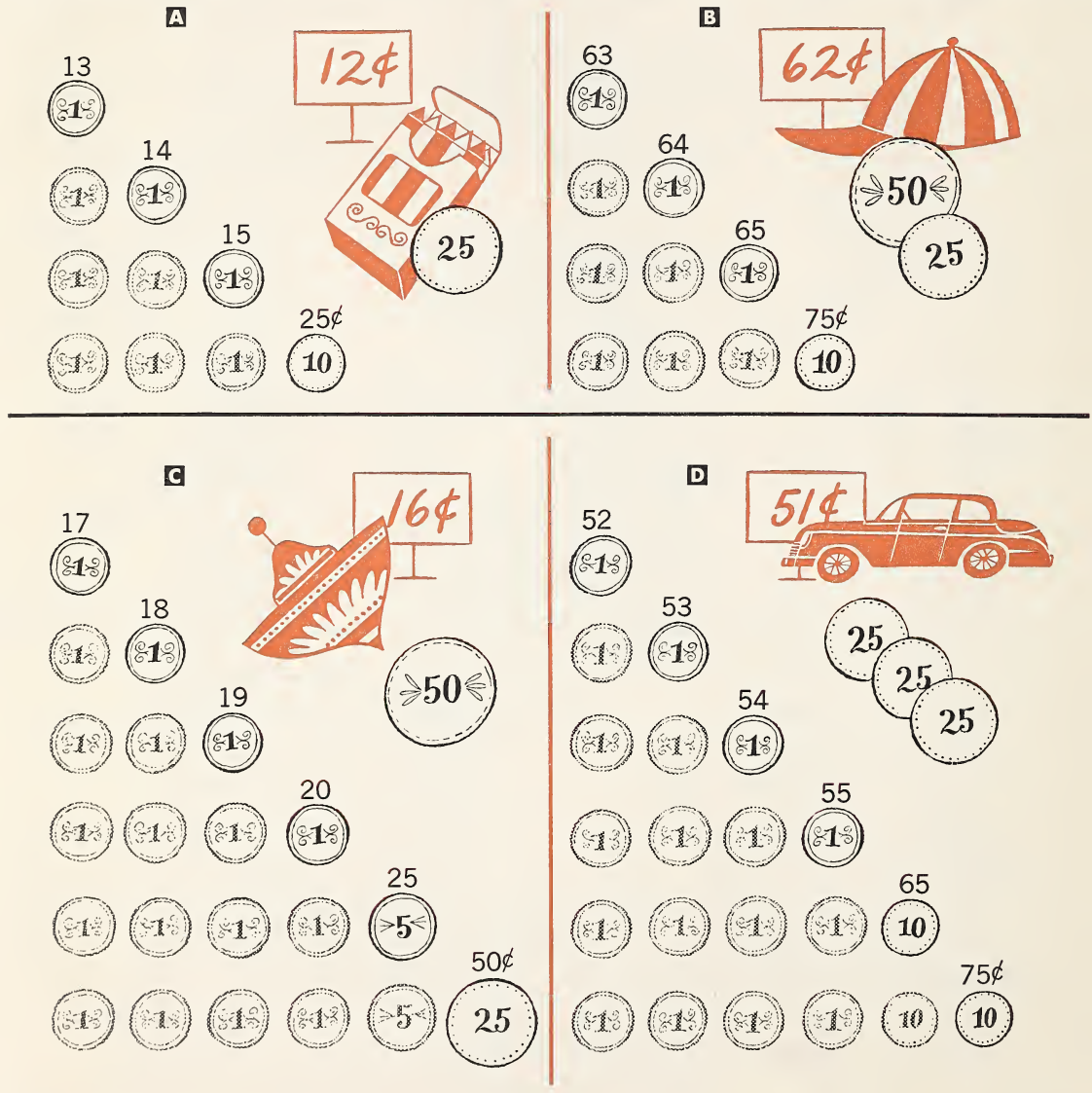


A 1 nickel = ▒ pennies
B 1 dime = ▒ pennies
C 1 dime = ▒ nickels
D 1 quarter = ▒ pennies
E 1 quarter = ▒ nickels
F 1 half dollar = ▒ pennies
G 1 half dollar = ▒ nickels
H 1 half dollar = ▒ dimes
I 1 half dollar = ▒ quarters
J 1 dime = 1 nickel ▒ pennies
K 1 quarter = 1 dime ▒ nickels
L 1 quarter = 2 dimes ▒ pennies
M 1 quarter = 1 dime ▒ pennies
N 1 quarter = ▒ dimes 5 pennies
O 1 half dollar = ▒ dimes 2 nickels
P 1 half dollar = 1 quarter ▒ nickels
Q 1 half dollar = ▒ dimes 4 nickels
R 1 half dollar = 4 dimes ▒ nickels

Now you should know how to count money, using pennies, nickels, dimes, quarters, and half dollars.

Moving forward

On pages 56 to 58 you will learn how to count your change, using pennies, nickels, dimes, and quarters.



27¢

50¢

28 29 30 40 50¢

1¢ 1¢ 1¢ 10 10

A

10¢

25

15 ▢ ¢

5¢ 10

B

49¢

25 10 10 10

▢ ▢ ¢

1¢ 5¢

C

15¢

50¢

▢ ▢ ¢

10 25

D

48¢

25 10 5¢ 10

▢ ▢ ¢

1¢ 1¢

E

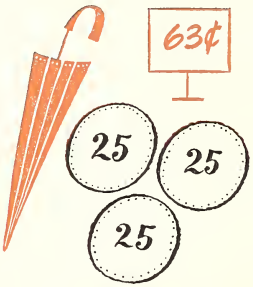
12¢

10 5¢

▢ ▢ ▢ ¢

1¢ 1¢ 1¢

F



63¢

25 25 25

▢ ▢ ▢ ¢

1¢ 1¢ 10

G

5¢

25

▢ ▢ ¢

10 10

H

25¢

50¢

▢ ¢

25

I

2¢

10

▢ ▢ ▢ ▢ ¢

1¢ 1¢ 1¢ 5¢

J

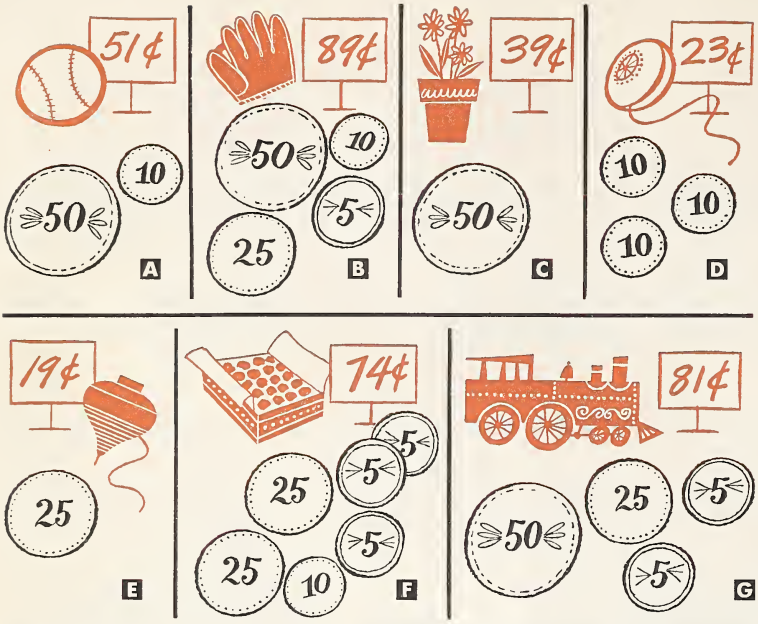
59¢

25 10 10 10 10

▢ ▢ ¢

1¢ 5¢

K



For each problem on this page, draw the coins that you would use in making change. Under each coin write the number you would say as you make the change.

H Don gave the man a half dollar for a hammer that cost 29¢.

I Carol bought a doll for 59¢. She gave the man 3 quarters.

J Tom bought a car for 43¢. He gave the man a quarter and 2 dimes.

K Nancy gave the man a dime for a bank that cost 5¢.

L Don bought a book for 17¢. He gave the man a quarter.

M Carol gave the man 90¢ for flowers that cost 82¢.

N Betty gave the man a quarter for a ball that cost 12¢.

O Jack bought a horn for 22¢. He gave the man 2 dimes and a nickel.

P Ellen gave the man 3 nickels for a toy wagon that cost 12¢.

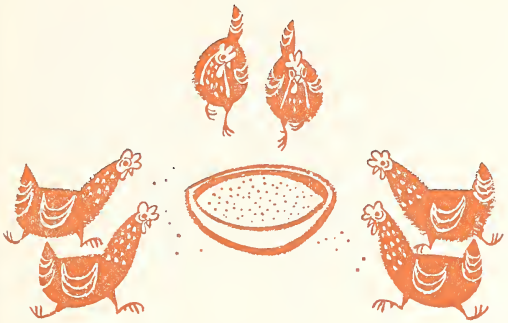
Q Tom gave the man a quarter for a paintbox that cost 10¢.

R June gave the man a half dollar for a turtle that cost 27¢.

S Billy bought an apple for 6¢. He gave the man 1 dime.

Now you should know how to count change, using pennies, nickels, dimes, and quarters.

Using arithmetic



A

A Look at Picture A. How many groups of chickens are there? How many chickens are in each group? How many chickens are eating?
3 ~~ 2 = ▒

B Bill had 10 schoolbooks. He gave 2 of them to Tom to carry. How many schoolbooks did Bill have left to carry?
10 ~~ 2 = ▒

C Ellen put 9 flowers into groups. She put 3 flowers in each group. How many groups of flowers did she make?
9 ~~ 3 = ▒

D Don had 6 apples. He ate 1 of them. How many apples did Don have then?
6 ~~ 1 = ▒

E Jack had 4 tops. He made 5 more tops. How many tops did Jack have then?
4 ~~ 5 = ▒

F Tom put 8 toy airplanes into groups. He put 4 airplanes in each group. How many groups did he make?
8 ~~ 4 = ▒

G 6 toy boats were in a pond. Don put 3 more boats in the pond. Then how many boats were in the pond?
6 ~~ 3 = ▒

H May saw 2 groups of oranges in a store. There were 4 oranges in each group. How many oranges did May see in all?

I June put 10 plants into groups. She put 2 plants in each group. How many groups did she make?

J There were 4 dolls on a shelf. Nancy put 5 more dolls on the shelf. How many dolls were on the shelf then?

K Jack put 4 groups of toy boats into a box. There were 2 boats in each group. How many toy boats did Jack put into the box?

L 8 birds were eating. 3 of them flew away. Then how many birds were eating?

M 6 horses were in the barn. 4 more horses came into the barn. How many horses were in the barn then?

N A man put 2 groups of apples into a basket. There were 4 apples in each group. How many apples did he put into the basket?

O June put 10 apples into groups. She put 5 apples in each group. How many groups did she make?

P Ellen had 8 candles in a box. She put 2 of them on the table. How many candles were left in the box?

Q Nancy made 6 doll hats last week. She made 3 more doll hats this week. How many doll hats did she make?

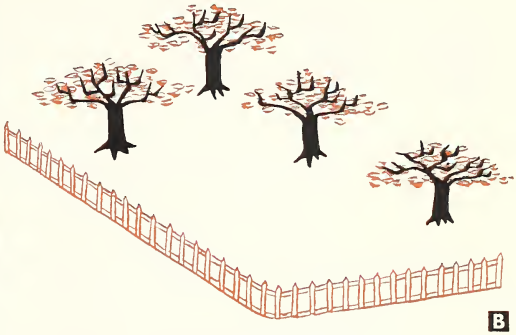
R Don had 8 toy boats at home. He took 2 of them to school. How many toy boats were left at home?

Keeping skillful

A $7+3=$	**L** $3\times3=$	**A** $10-1=$	**L** $2+3=$
B $5+2=$	**M** $2\times5=$	**B** $4\times2=$	**M** $10-8=$
C $4+4=$	**N** $2\times3=$	**C** $8\div2=$	**N** $7-2=$
D $6+3=$	**O** $9\div3=$	**D** $8+2=$	**O** $3+6=$
E $2+8=$	**P** $6+2=$	**E** $9-3=$	**P** $5-4=$
F $9-5=$	**Q** $4\div2=$	**F** $2\times2=$	**Q** $6\div3=$
G $10-3=$	**R** $10-7=$	**G** $5+4=$	**R** $4+5=$
H $8-6=$	**S** $8\div4=$	**H** $10-5=$	**S** $3\times2=$
I $7-4=$	**T** $9-7=$	**I** $3+7=$	**T** $6-4=$
J $9-8=$	**U** $6\div2=$	**J** $10\div2=$	**U** $3+4=$
K $2\times4=$	**V** $10\div5=$	**K** $7+2=$	**V** $7-5=$

Exploring problems

A



B

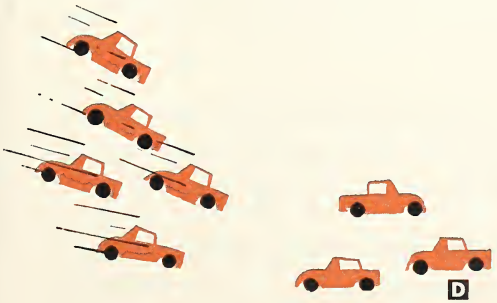
C

A Look at Pictures A and B first. There are 5 trees in Don's yard and 4 trees in Betty's yard. How many trees are there in all?

Next imagine that the two groups of trees are being put together into one group. Look at Picture C.

$5 + 4 =$ ▒

There are ▒ trees in all.



D

B Tom has 3 toy cars, and Don has 5 toy cars. How many toy cars have the boys in all?

Imagine that the two groups of cars are being put together.

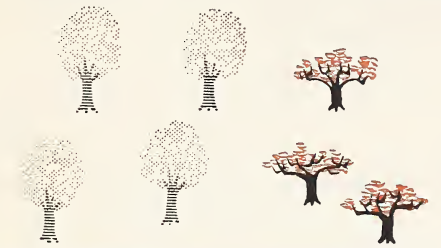
Look at Picture D. $3 + 5 =$ ▒

The boys have ▒ toy cars in all.

A

A There are 7 trees in the yard.
4 of them are apple trees.
The others are peach trees. How many are peach trees?

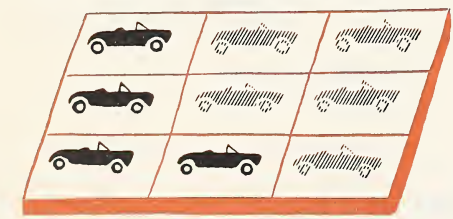
Imagine that 4 trees are being taken away from 7 trees. Look at Picture A.
$7 - 4 =$ ▒
▒ of the trees are peach trees.



B

B Carol and Don have 8 books.
2 of the books are Don's. The others are Carol's. How many of the books are Carol's?

Imagine that 2 books are being taken away from 8 books. Look at Picture B.
$8 - 2 =$ ▒
▒ of the books are Carol's.



C

C There are 9 cars in a box.
5 of them belong to Don. The others belong to Bill. How many cars belong to Bill?

Imagine that 5 cars are being taken away from 9 cars. Look at Picture C.

D

D 10 ducks are in a pond. 4 of them belong to Tom. The others belong to Jack. How many belong to Jack?

Imagine that 4 ducks are being taken away from 10 ducks. Look at Picture D.

E There are 4 flowers on Carol's plant and 3 flowers on May's plant. How many flowers are there in all?

F There are 7 toy cars on the table. 4 of them are Tom's. The others are Bill's. How many toy cars are Bill's?

G At the store Carol got 4 drawing books, and Ellen got 6 drawing books. The two girls got how many drawing books at the store?

H Tom saw 5 birds in his yard. Jack saw 5 birds in his yard. How many birds in all did they see?

I 9 spools are in a box. 7 of them are Ellen's. The others are June's. How many spools are June's?

J June missed 2 days of school last week. She missed 3 days this week. How many days did she miss in all?

K 6 dogs are playing. 2 of them are big, and the others are little. How many are little?

L Tom says that he has 5 pictures of dogs at home and 3 pictures of dogs at school. He has how many pictures of dogs in all?

In some problems, groups are put together or separated. In other problems you imagine that the groups are put together or separated.

Keeping skillful

For each of the next problems, first draw the coins that you would use in making change. Then write under each coin the number that you would say as you make change.

A Jack bought a top for 27¢. He gave the man 2 quarters.

B Don gave the man a half dollar for a hammer that cost 36¢.

C Jack bought some candy for 13¢. He gave the man a dime and a nickel.

D Ellen bought a painting book for 29¢. She gave the man a quarter and a dime.

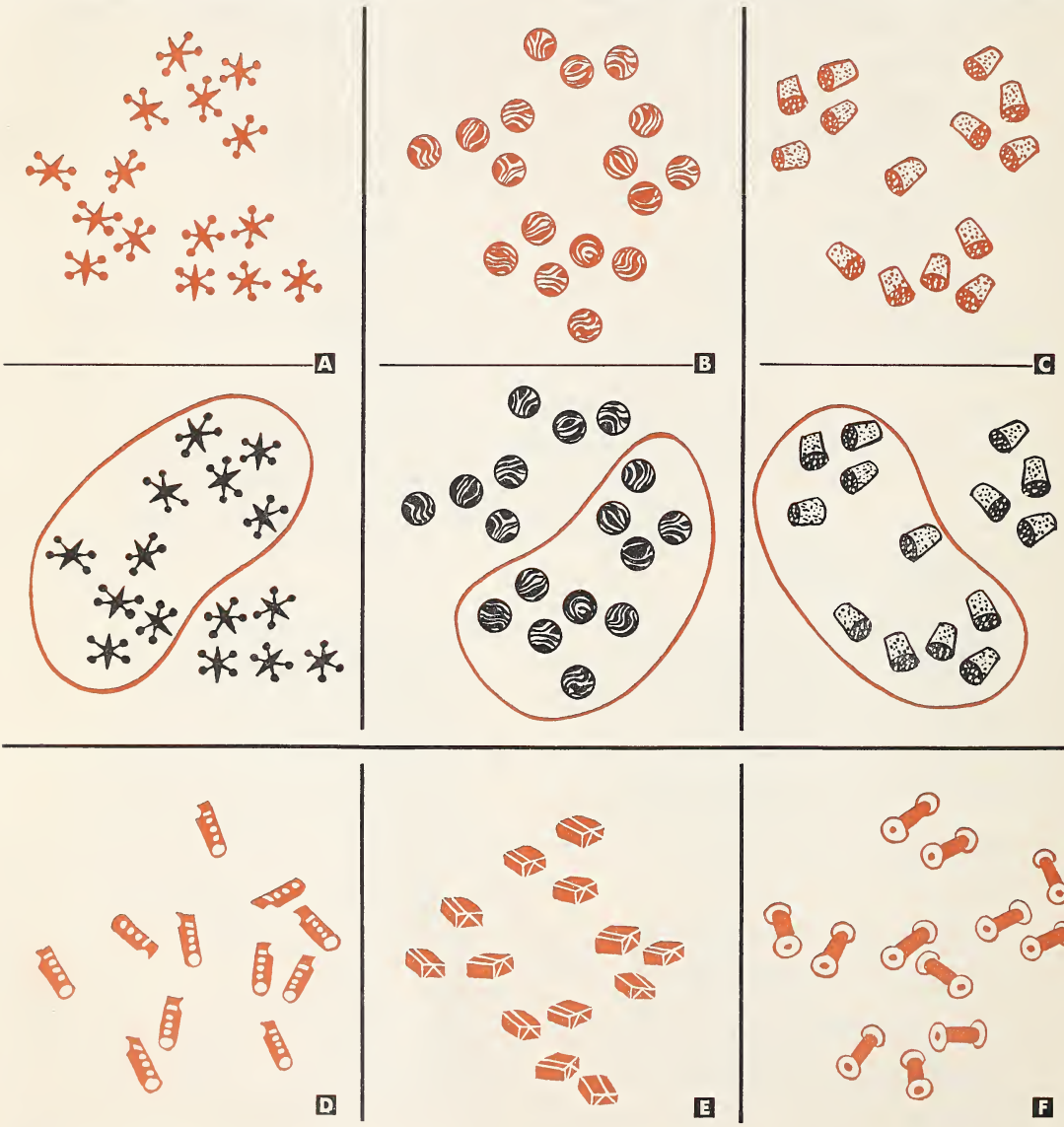
E Bill bought a bank for 32¢. He gave the man a quarter and a dime.

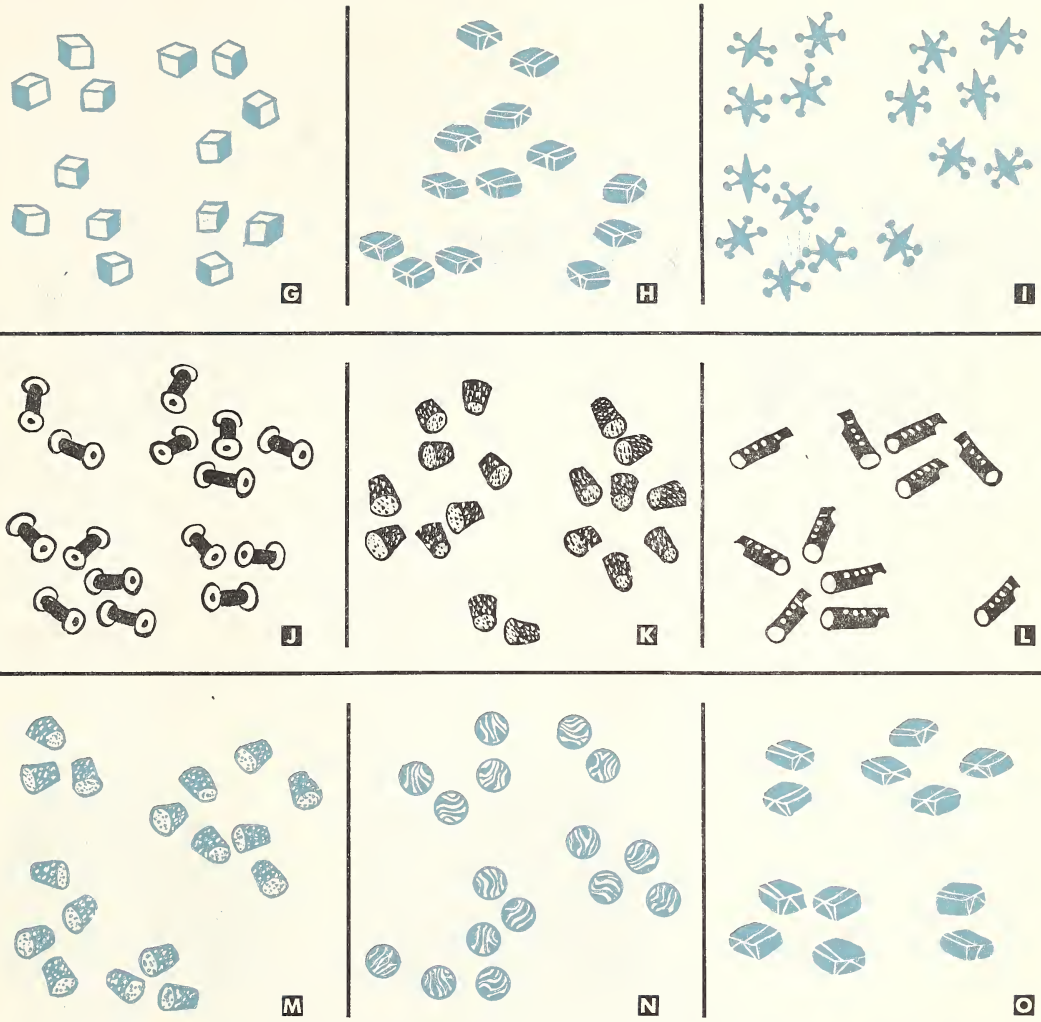
F Carol gave the man 2 quarters, 2 dimes, and a nickel for a doll that cost 73¢.

G Betty bought oranges for 63¢. She gave the man 2 quarters and 2 dimes.

Moving forward

On pages 64 and 65 you will learn to see a group of 10 in a larger group. You will work with groups as large as 18.





A 1 ten 7 ones = ▭

B 1 ten 1 one = ▭

C 1 ten 3 ones = ▭

D 1 ten 8 ones = ▭

E 1 ten 6 ones = ▭

F 1 ten 4 ones = ▭

G 1 ten 2 ones = ▭

H 1 ten 5 ones = ▭

I 18 = ▭ ten ▭ ones

J 13 = ▭ ten ▭ ones

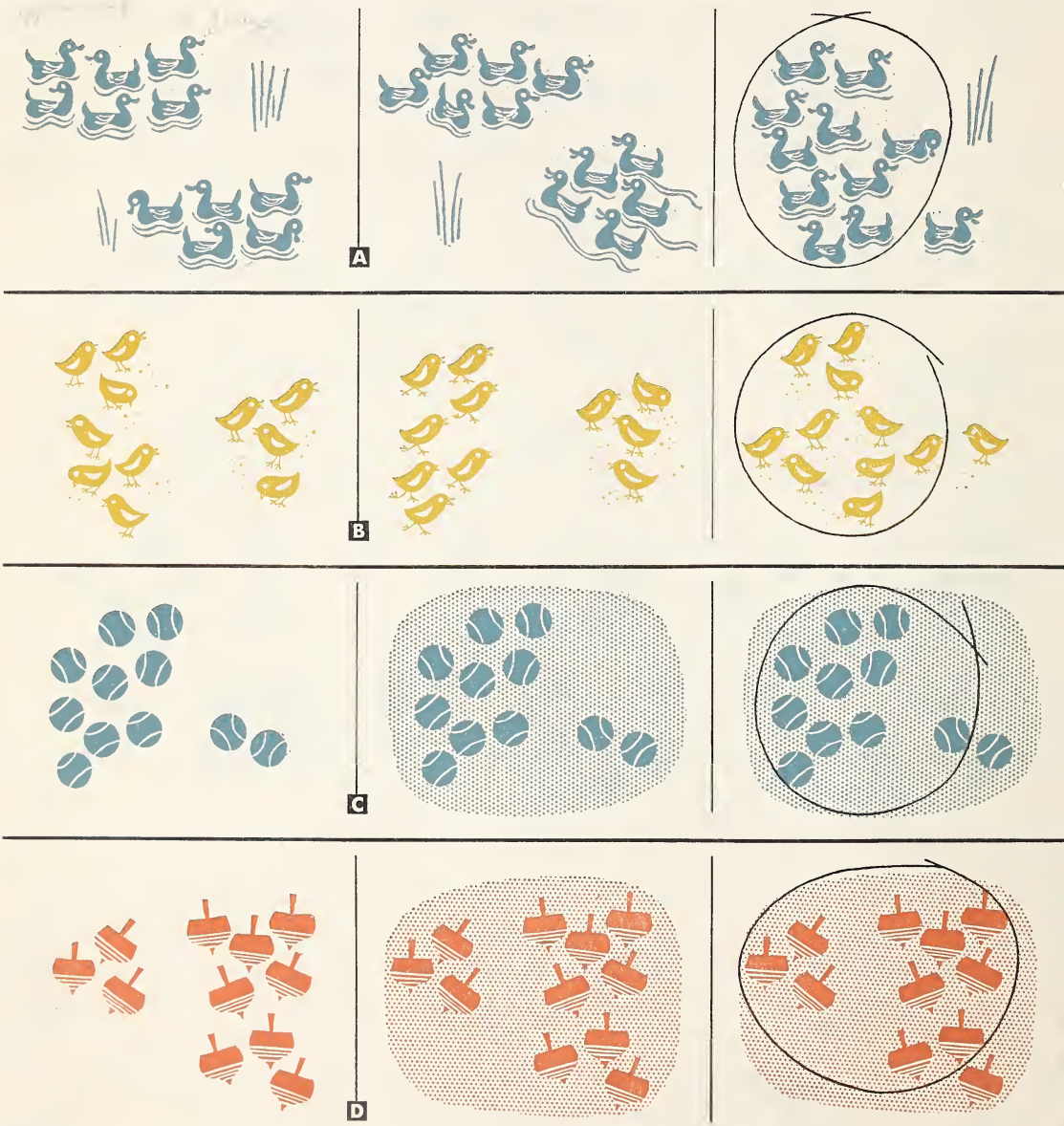
K 17 = ▭ ten ▭ ones

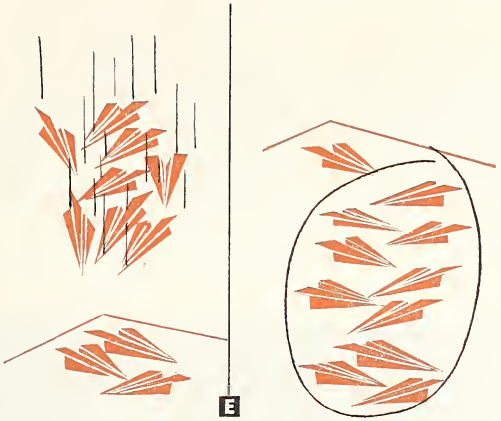
L 14 = ▭ ten ▭ ones

Now you should know how to see a group of 10 in a larger group.

Moving forward

On pages 66 to 70 you will learn to add to make 11 and also to subtract from 11.

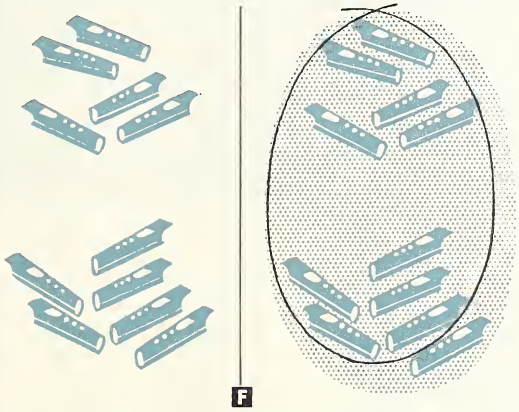




E

3 airplanes were on a table.
Don put 8 more airplanes
on the table.
Then how many airplanes were
on the table?

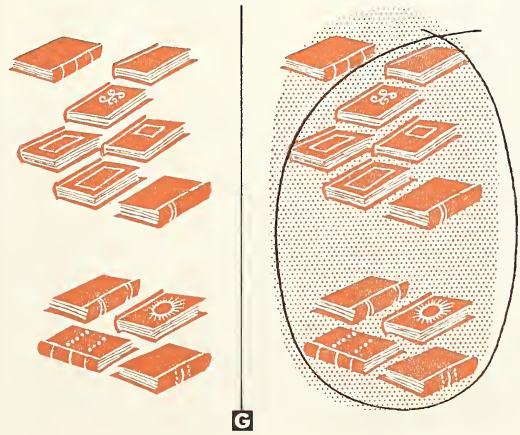
$3 + 8 = \square$



F

Tom had 5 whistles.
Bill had 6 whistles.
How many whistles did the boys
have in all?

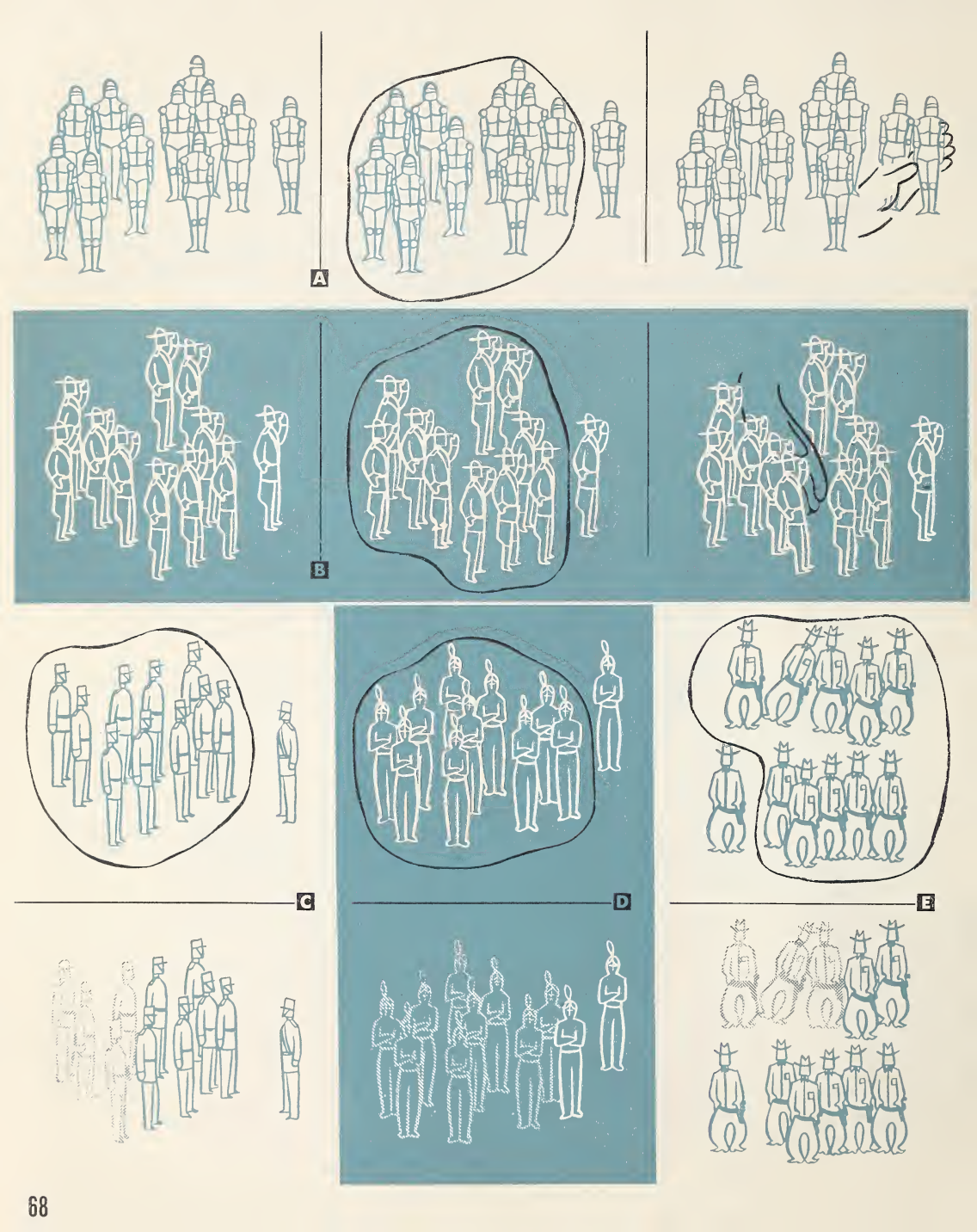
$5 + 6 = \square$ $6 + 5 = \square$

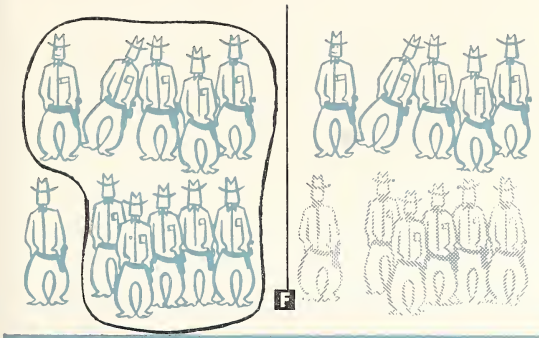


G

Betty took 7 books to school
to show the other children.
Ann took 4 books to school
to show them.
How many books in all did the girls
take to school?

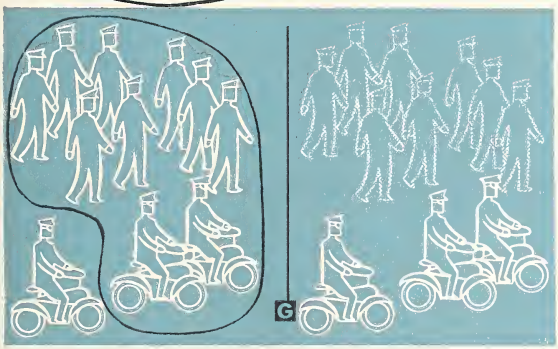
$7 + 4 = \square$ $4 + 7 = \square$


A
B
C
D
E



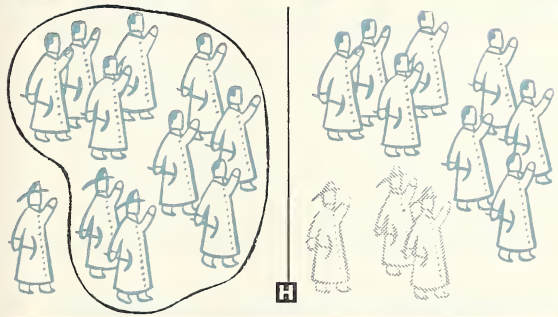
There are 11 toy cowboys
on the table.
6 of the cowboys belong to Don.
The others belong to Tom.
How many cowboys belong to Tom?

$11 - 6 = \square$



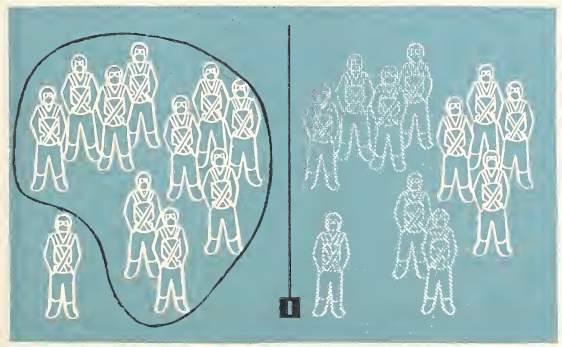
Jack has 11 toy policemen.
8 of them are marching.
The others are riding.
How many of them are riding?

$11 - 8 = \square$



Tom has 11 toy firemen.
3 of them have hats.
The others are without hats.
How many firemen are without hats?

$11 - 3 = \square$



11 toy pilots are on the table.
7 of them belong to Tom.
The others belong to Bill.
How many pilots belong to Bill?

$11 - 7 = \square$

A $5+6=$ ▒
B $11-8=$ ▒
C $11-3=$ ▒
D $2+9=$ ▒
E $4+7=$ ▒
F $11-2=$ ▒
G $6+5=$ ▒
H $11-9=$ ▒

I $3+8=$ ▒
J $7+4=$ ▒
K $11-5=$ ▒
L $11-7=$ ▒
M $9+2=$ ▒
N $11-6=$ ▒
O $8+3=$ ▒
P $11-4=$ ▒

A $10\div2=$ ▒
B $4\times2=$ ▒
C $11-2=$ ▒
D $3+6=$ ▒
E $7+3=$ ▒
F $8\div2=$ ▒
G $9\div3=$ ▒
H $4+7=$ ▒

I $3\times2=$ ▒
J $11-4=$ ▒
K $6\div2=$ ▒
L $9+2=$ ▒
M $10-4=$ ▒
N $8+3=$ ▒
O $11-7=$ ▒
P $5+6=$ ▒

Now you should know how to add to make 11 and also how to subtract from 11.

Using arithmetic

A Betty had 10 peaches. She ate 3 of them. She had how many peaches left?

B Tom saw 5 birds in a tree, and Jack saw 6 birds in another tree. How many birds in all did they see?

C Don had 9 toy pilots. He gave 3 of them to Tom. Then Don had how many toy pilots?

D There were 11 hammers in the store. The boys bought 3 of them. How many were left?

E June had 3 cookies. Her mother gave her 2 more. Then June had how many cookies?

F Nancy has 11 flowers. 9 of them are red, and the others are yellow. How many of them are yellow?

G Ellen had 3 apples. She bought 8 more apples. Then she had how many apples?

H June has 2 kittens, and Carol has 5 kittens. The girls have how many kittens in all?

I Don had 4 tops on Monday. On Tuesday he bought 7 more tops. Then he had how many tops?

J May has 11 plants. 6 have flowers. The others are without flowers. How many plants are without flowers?

K Don read 3 books last week. He read 5 books this week. How many books in all did he read?

L Mother put 8 cookies on a plate. Bill ate 2 of them. How many cookies were left on the plate?

Side trip

JANUARY

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

FEBRUARY

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

MARCH

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

A Tom's birthday is on May 1. Will he be in school that day?

B March 25 is on what day?

C June 12 is on what day?

D What day is your birthday? Will you be in school that day?

E Was your birthday on a school day last year?

F Will your birthday be on a school day each year?

G What are the first and last days of the week?

H The last day of May is what day of the week?

I The first day of June is what day of the week?

J Will the last day of May be the same day of the week next year as it is this year?

K Will the first day of June be the same day of the week next year as it is this year?

L How many months are there in a year?

M How many days are there in a week?

N Which month is shortest?

O The first day of the year was Saturday. What will be the first day of the next year?

P Tuesday was the first day of which months?

Exploring problems

see

A Betty has 11 cups and 5 plates.
She has how many more cups than plates?
She has how many fewer plates than cups?

B Match as many cups as you can with plates.
5 cups can be matched with plates.
Some of the 11 cups are not matched.
You must find how many of the 11 cups are not matched.

C Imagine that the 5 matched cups are gone.

$11-5=\square$

This shows that you imagine 5 of the 11 as gone.

You must find this number.

compute

Subtract to find the missing number.

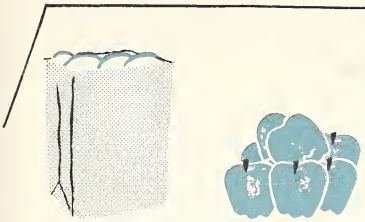
$$\begin{array}{r} 11 \\ -\ 5 \\ \hline 6 \end{array}$$

This number means that there are 6 more cups than plates.

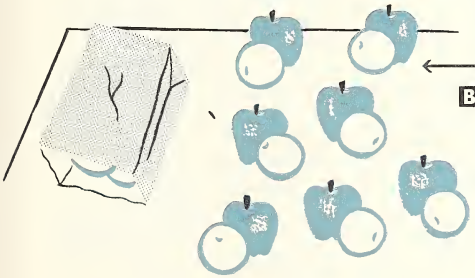
$11-5=6$

Betty has 6 more cups than plates.
She has 6 fewer plates than cups.

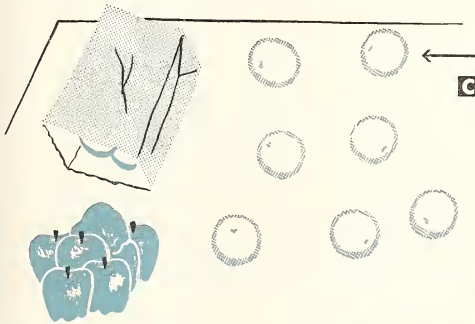
see



A Mother is buying 9 peaches and 7 apples. How many more peaches than apples is she buying? She is buying how many fewer apples than peaches?



B How many peaches can you match with apples?
Some of the 9 peaches are not matched.
You must find how many of the 9 peaches are not matched.



C Imagine that the 7 matched peaches are gone.

$9-7=\square$

This shows that you imagine ▒ of the 9 as gone.

You must find this number.

compute

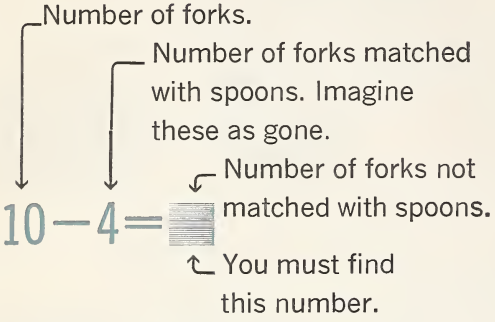
$$\begin{array}{r} 9 \\ 7 \\ \hline \square \end{array}$$

Subtract to find the missing number.
This number means that there are ▒ more peaches than apples.

Mother is buying ▒ more peaches than apples.
She is buying ▒ fewer apples than peaches.

$9-7=\square$

A Ellen has 10 forks and 4 spoons. She has how many more forks than spoons?


Number of forks.
Number of forks matched with spoons. Imagine these as gone.
Number of forks not matched with spoons.
10 − 4 = ▒
You must find this number.

Subtract 4 from 10.
There are ▒ more forks than spoons.

B Ellen has how many fewer spoons than forks?

C Nancy has 11 doll hats and 5 dolls. Find how many more doll hats she has than dolls.
11 − 5 = ▒

D Betty made 11 baskets. Ann made 7 baskets. Ann made how many fewer baskets than Betty?

E Bill had 10¢. He spent 7¢ for an orange. He had how many cents left?

F Carol spent 8 pennies, and Don spent 6 pennies. Don spent how many fewer pennies than Carol?

G Jack saw 9 ponies, and Tom saw 10 ponies. How many fewer ponies did Jack see than Tom?

H Don gave 5 toy pilots to Bill. He gave 3 toy pilots to Jack. He gave how many more pilots to Bill than to Jack?

I Betty painted 6 pictures, and June painted 5 pictures. The girls painted how many pictures in all?

Now you should know how to find how much larger or smaller one group is than another.

Keeping skillful

A 11 − 8 = ▒ 3
B 4 + 1 = ▒ 5
C 3 + 7 = ▒ 10
D 8 ÷ 4 = ▒ 2
E 3 − 2 = ▒ 1
F 5 + 4 = ▒ 9
G 3 × 3 = ▒ 9
H 5 + 3 = ▒ 8
I 11 − 9 = ▒ 2
J 10 ÷ 5 = ▒ 2
K 4 × 2 = ▒ 8
L 9 − 6 = ▒ 3
M 4 − 3 = ▒ 1
N 2 + 4 = ▒ 6
O 3 + 8 = ▒ 11
P 8 − 5 = ▒ 3
Q 6 ÷ 2 = ▒ 3
R 10 − 7 = ▒ 3
S 7 − 4 = ▒ 3
T 2 + 9 = ▒ 11
U 7 + 2 = ▒ 9

A 2 tens 37 ones = 5 ▒ tens 7 ones
B 54 = 4 tens 14 ones
C 93 = ▒ tens 13 ones
D 5 tens 18 ones = ▒ tens 8 ones
E 81 = 7 tens 11 ones

Exploring problems

see

A

June had 6 leaves. Carol gave her some more. Now she has 11 leaves. How many leaves did Carol give her?

← June had 6 leaves at first.

Number of leaves she had at first

6 ←

B

← You do not know how many leaves Carol gave her.

$6+\square$

Number of leaves Carol gave her

C

← June has 11 leaves now.

Number of leaves she has now

$6+\square=11$

You must find this number.

compute

← You know June has 11 leaves now.

D

Number of leaves she has now

11 ←

Now turn the page.

E Think of a group of leaves equal to the leaves June had at first.

Number of leaves June had at first

6

F Imagine that this group of 6 leaves is gone.

$$\begin{array}{r} 11 \\ -\ 6 \\ \hline \square \end{array}$$

Subtract 6 from 11.

$$\begin{array}{r} 11 \\ -\ 6 \\ \hline 5 \end{array}$$

The number that is left shows how many leaves Carol gave June.

Carol gave her 5 leaves.

This number is 5. Carol gave June 5 leaves.

$$6 + \square = 11$$

see

A Jack has 4 cents. A boat he wants to buy costs 10 cents. How many more cents does he need to buy the boat?

What does this number stand for?

What does this stand for?

$$4 + \square = 10$$

What does this number stand for?

compute

B How many cents does Jack need in all?

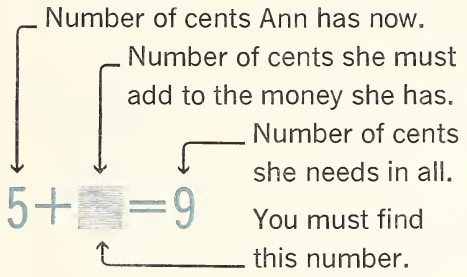
Why do you imagine 4 cents are gone?

$$\begin{array}{r} 10 \\ -\ 4 \\ \hline \square \end{array}$$

Subtract 4 from 10.

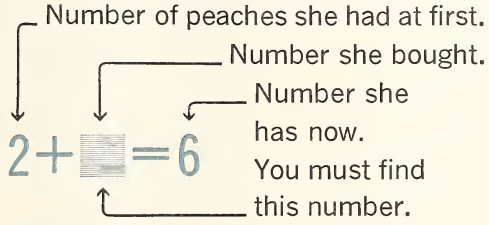
Jack needs ▒ more cents.

A A balloon costs 9¢. Ann has 5¢. How many more cents does she need to buy the balloon?


Number of cents Ann has now.
Number of cents she must add to the money she has.
Number of cents she needs in all.
5 + ▒ = 9
You must find this number.

Subtract 5 from 9.

B Mother had 2 peaches. She bought some more. Now she has 6 peaches. How many peaches did she buy?



Subtract 2 from 6.

C Don has 3 spools. He needs 8 spools to make a toy. How many more spools does he need?

3 + ▒ = 8 Subtract 3 from 8.

D There were 6 cookies on a plate. Nancy put more cookies on it. Then there were 10 cookies on the plate. How many cookies did Nancy put on the plate?

6 + ▒ = 10 Subtract 6 from 10.

E Ellen wants to draw 10 pictures. She has drawn 5 of them. How many more pictures should she draw?

5 + ▒ = 10 Subtract 5 from 10.

F Mother has 2 cups. She needs 8 cups in all. How many more cups does she need?

2 + ▒ = 8 Subtract 2 from 8.

G Carol had 3 flowers. Ann gave her some more. Then she had 9 flowers. How many flowers did Ann give her?

3 + ▒ = 9 Subtract 3 from 9.

H The children have 4 horns. They need 7 horns in all. How many more horns do they need?

I Carol had 7 toy bears. She got some more for her birthday. Now she has 9 toy bears. How many bears did she get for her birthday?

J Jack needs 7 big blocks. He has 4 blocks. How many more blocks does he need?

K June had 3 dolls. Her mother gave her some more. Now June has 7 dolls. How many dolls did her mother give her?

L The girls made 10 cupcakes. They ate 7 of them. Then they had how many cupcakes?

M Bill wants to save 10 cents. He has saved 8 cents. How many more cents does he need to save?

N Don had 5 toy pilots on Monday. On Tuesday he bought more. Then he had 7 toy pilots. How many toy pilots did he buy on Tuesday?

O 2 kittens were in the barn. Tom put 3 more kittens in the barn. How many kittens were in the barn then?

P Tom is going to read 10 pages in a book about dogs. He has read 4 pages. How many more pages does he need to read in this book?

Q Nancy has 6 little dolls and 11 doll dresses. She has how many more doll dresses than dolls?

R Don is making wagons. He needs 8 milk caps for wheels. He has 4 milk caps. How many more milk caps does he need?

S Ellen had 7 pennies in her bank. Mother gave her some more pennies to put in it. Then Ellen had 11 pennies in her bank. How many pennies did Mother give her?

T Betty has 6 hats for her 8 dolls. How many more hats should she make to have a hat for each of her dolls?

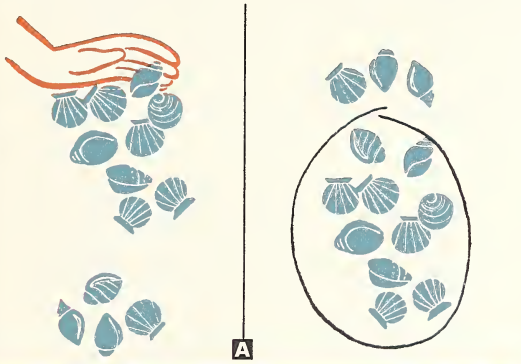
Now you should be able to find how many were added or how many more are needed.

Keeping skillful

A $2+\square=9$	**M** $2+8=\square$	**A** $4+5=\square$	**M** $11-2=\square$
B $3+\square=7$	**N** $5+6=\square$	**B** $8+\square=11$	**N** $5\times2=\square$
C $7+\square=10$	**O** $6+3=\square$	**C** $7+2=\square$	**O** $9\div3=\square$
D $4+\square=9$	**P** $2+5=\square$	**D** $6+\square=10$	**P** $11-8=\square$
E $1+\square=6$	**Q** $7+4=\square$	**E** $8+2=\square$	**Q** $4\times2=\square$
F $2+\square=11$	**R** $5+4=\square$	**F** $1+\square=9$	**R** $6\div3=\square$
G $5+\square=10$	**S** $4+6=\square$	**G** $3+\square=10$	**S** $10-1=\square$
H $3+\square=8$	**T** $2+6=\square$	**H** $5+5=\square$	**T** $10\div5=\square$
I $6+\square=11$	**U** $4+7=\square$	**I** $4+4=\square$	**U** $2\times3=\square$
J $8+\square=10$	**V** $5+3=\square$	**J** $9+\square=11$	**V** $11-6=\square$
K $4+\square=8$	**W** $9+2=\square$	**K** $4+\square=6$	**W** $8\div4=\square$
L $4+\square=11$	**X** $3+8=\square$	**L** $7+\square=11$	**X** $10\div2=\square$

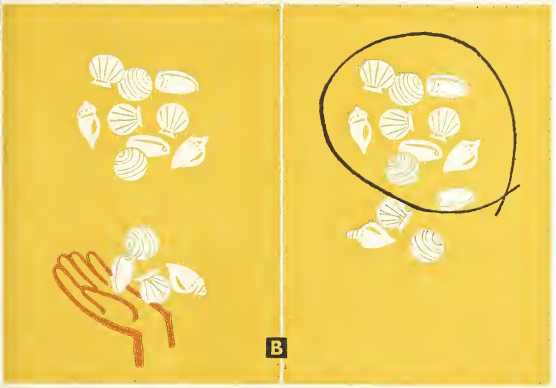
Moving forward

On pages 79 to 82 you will learn to add numbers to make 13 and 17. You will also learn to subtract from 13 and 17.



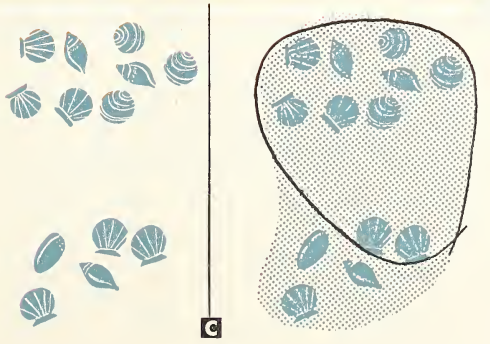
Carol had 4 shells.
She found 9 more shells.
How many shells did she have then?

$4 + 9 = \square$



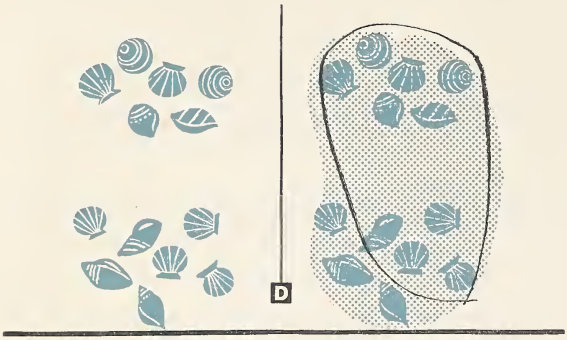
Tom had 9 shells.
Jack gave him 4 more shells.
How many shells did Tom have then?

$9 + 4 = \square$



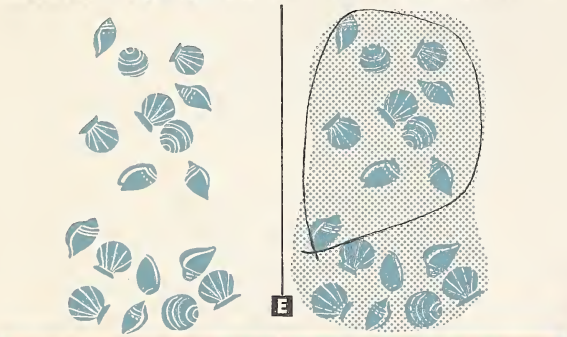
Betty has 8 shells.
Nancy has 5 shells.
How many shells do the two girls have in all?

$8 + 5 = \square$ $5 + 8 = \square$



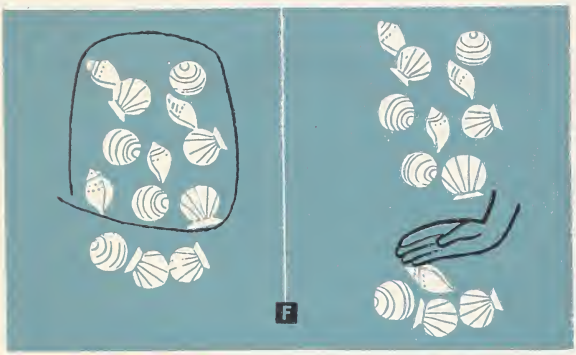
Ann has 6 shells at home.
She has 7 shells at school.
How many shells has she in all?

$6+7=\square$ $7+6=\square$



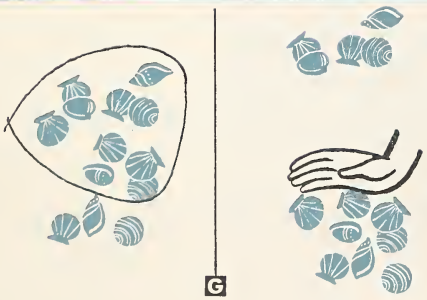
Don has 9 shells in one box
and 8 shells in another box.
He has how many shells altogether
in the boxes?

$9+8=\square$ $8+9=\square$



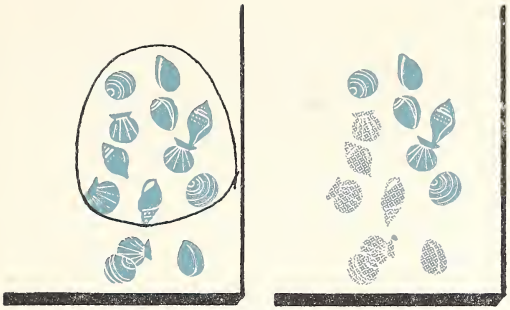
Don found 13 shells.
He gave 4 of them away
to another boy.
He has how many shells left?

$13-4=\square$



Bill had 13 shells at home.
He took 8 of them to school.
How many shells did he leave
at home?

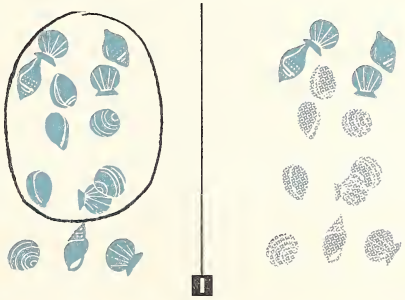
$13-8=\square$



H

There are 13 shells on the shelf.
7 of them are Don's, and the others are Carol's.
How many of them are Carol's?

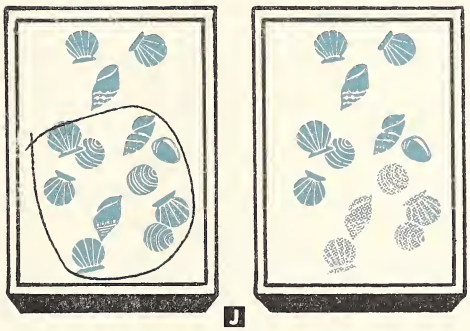
$13 - 7 = \square$



I

Yesterday Ann and Bill found 13 shells.
Ann found 9 of them, and Bill found the rest.
How many shells did Bill find?

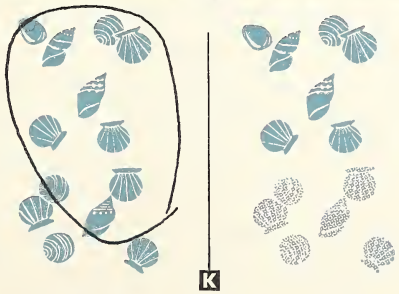
$13 - 9 = \square$



J

There are 13 shells in a box.
5 of them are Jack's, and the others are Tom's.
How many of the shells are Tom's?

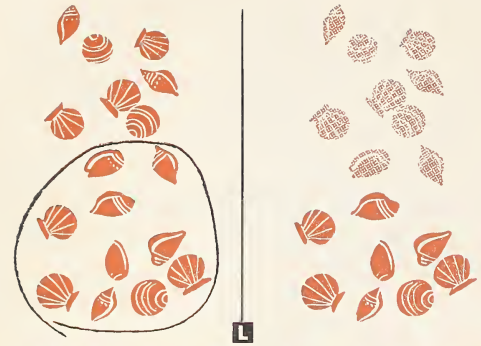
$13 - 5 = \square$



K

Today Tom's father found 13 shells.
6 shells are for Tom.
The rest are for Nancy.
How many shells are for Nancy?

$13 - 6 = \square$



Yesterday Tom's mother found 17 shells.
She will use 9 shells in her garden
and the others in a flower box.
How many shells will she use
in a flower box?

$17 - 9 = \square$

There are 17 shells in the box.
8 of them belong to Bob.
The rest belong to Betty.
How many shells belong to Betty?

$17 - 8 = \square$

A $17 - 9 = \square$
B $4 + 9 = \square$
C $13 - 8 = \square$
D $9 + 8 = \square$
E $8 + 5 = \square$
F $13 - 4 = \square$
G $7 + 6 = \square$
H $6 + 7 = \square$
I $13 - 6 = \square$
J $5 + 8 = \square$
K $13 - 5 = \square$
L $9 + 4 = \square$

M $8 + 9 = \square$
N $17 - 8 = \square$
O $13 - 7 = \square$
P $13 - 9 = \square$

A $8 - 5 = \square$
B Add 8 to 5.
C $2 \times 3 = \square$
D Subtract 9 from 13.
E Divide 8 by 4.
F Add 9 to 8.
G Divide 9 by 3.

H Subtract 8 from 13.
I Multiply 4 by 2.
J 9 plus 8 equals $\square$.
K Subtract 8 from 17.
L Divide 10 by 5.
M Add 7 to 6.
N 13 minus 7 equals $\square$.
O Multiply 2 by 5.
P Divide 6 by 2.
Q Add 4 to 9.
R Divide 6 by 3.
S Subtract 9 from 17.

Now you should know which numbers to add to make 13 and 17 and how to subtract from 13 and 17.

Keeping skillful

A 1 half dollar = 3 dimes ▒ nickels
B 1 quarter = ▒ dimes 1 nickel
C 1 dime = 1 nickel ▒ pennies
D 1 half dollar = ▒ quarters
E 1 quarter = ▒ pennies
F 1 half dollar = 2 dimes ▒ nickels
G 1 quarter = 1 dime ▒ pennies
H 1 dime = ▒ pennies
I 1 half dollar = ▒ nickels
J 1 half dollar = 3 dimes ▒ pennies
K 1 quarter = ▒ nickels
L 1 quarter = 2 dimes ▒ pennies
M 1 half dollar = 1 quarter ▒ nickels
N 1 nickel = ▒ pennies
O 1 half dollar = ▒ dimes
P 1 quarter = 1 dime ▒ nickels
Q 1 half dollar = 1 quarter ▒ pennies
R 1 half dollar = ▒ pennies
S 1 dime = ▒ nickels
T 1 half dollar = ▒ dimes 2 nickels

A 4 tens 13 ones = ▒ tens 3 ones
B 45 = ▒ tens 15 ones
C 39 = 2 tens ▒ ones
D 7 tens 25 ones = 9 tens ▒ ones
E 3 tens 37 ones = ▒ tens 7 ones
F 26 = 1 ten ▒ ones
G 8 tens 19 ones = 9 tens ▒ ones
H 72 = ▒ tens 12 ones
I 5 tens 43 ones = 9 tens ▒ ones
J 66 = ▒ tens 16 ones
K 74 = 6 tens ▒ ones
L 3 tens 33 ones = 6 tens ▒ ones
M 2 tens 47 ones = ▒ tens 7 ones

Checking up

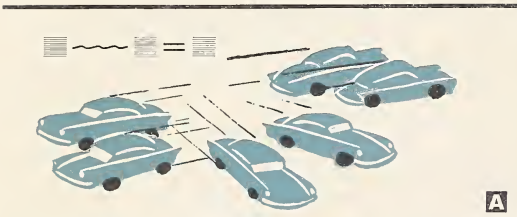
Test 1

A 2+9=▒
B 8+9=▒
C 8+5=▒
D 4+7=▒
E 5+8=▒
F 7+4=▒
G 4+9=▒
H 3+8=▒
I 9+2=▒
J 6+7=▒
K 8+3=▒
L 9+4=▒
M 5+6=▒
N 9+8=▒
O 6+5=▒
P 7+6=▒

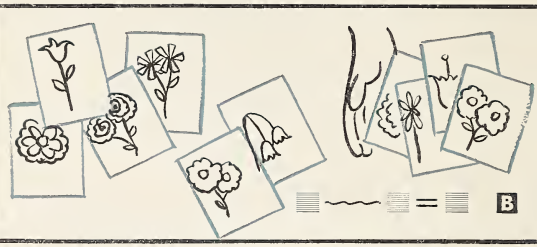
Test 2

A 11−8=▒
B 17−9=▒
C 13−6=▒
D 13−4=▒
E 11−2=▒
F 11−5=▒
G 13−5=▒
H 11−3=▒
I 13−9=▒
J 11−6=▒
K 17−8=▒
L 13−7=▒
M 11−9=▒
N 13−8=▒
O 11−7=▒
P 11−4=▒

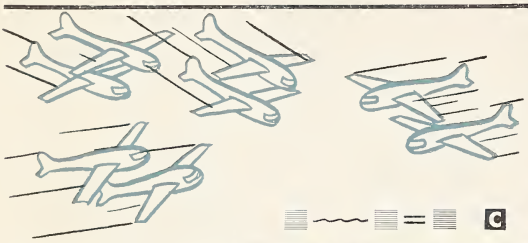
Using arithmetic



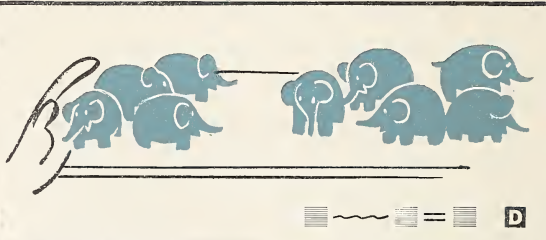
A



B



C



D

A There were 10 toy policemen in a box in the store. Tom bought 2 of them. Then how many toy policemen were in the box?

B Don's bird book has 10 pages. Don wants to put a bird picture on each page. He now has 8 pictures in the book. How many more pictures does he need?

C Jack has nine problems to do. Bill has four problems to do. Bill has how many fewer problems to do than Jack?

D Ellen has 4 books about flowers, and Betty has 4 books about flowers. The girls have how many books about flowers altogether?

E Don wants to put ten shells into groups of two shells each. How many groups will he have?

F Bob found 7 stones on Saturday and 2 stones on Monday. How many stones did he find on these two days?

G Ann has 8 small dolls. She has 3 doll dresses. She has how many more dolls than doll dresses?

H 2 groups of boys were playing ball. There were 5 boys in each group. How many boys were playing ball?

I Bill has 4 books about boats. He has 2 books about airplanes. He has how many more books about boats than about airplanes?

J Tom has 8 cents. He wants to buy a toy policeman that costs 13 cents. How many more cents does he need to buy the toy policeman?

K On Monday 3 groups of girls worked in the school garden. There were 3 girls in each group. How many girls worked in the garden that day?

L On Tuesday 11 boys and 8 girls worked in the school garden. How many more boys than girls worked in the garden that day?

M Bill found 13 stones on his way home, and Jack found 9. Jack found how many fewer stones than Bill?

N Jack spent 10 cents, and Tom spent 6 cents. Jack spent how much more money than Tom?

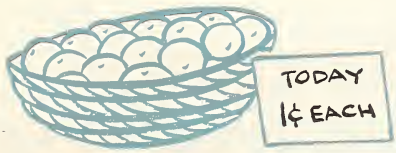
O Bill had 8 toy firemen. His father gave him 5 more. Then Bill had how many toy firemen?

P Tom had 11 horses for his toy barnyard. He gave 2 of them to Bill. Then Tom had how many horses?

Thinking straight

A

B



C

A How much does the candy in Picture A cost? How much does the candy in Picture B cost?

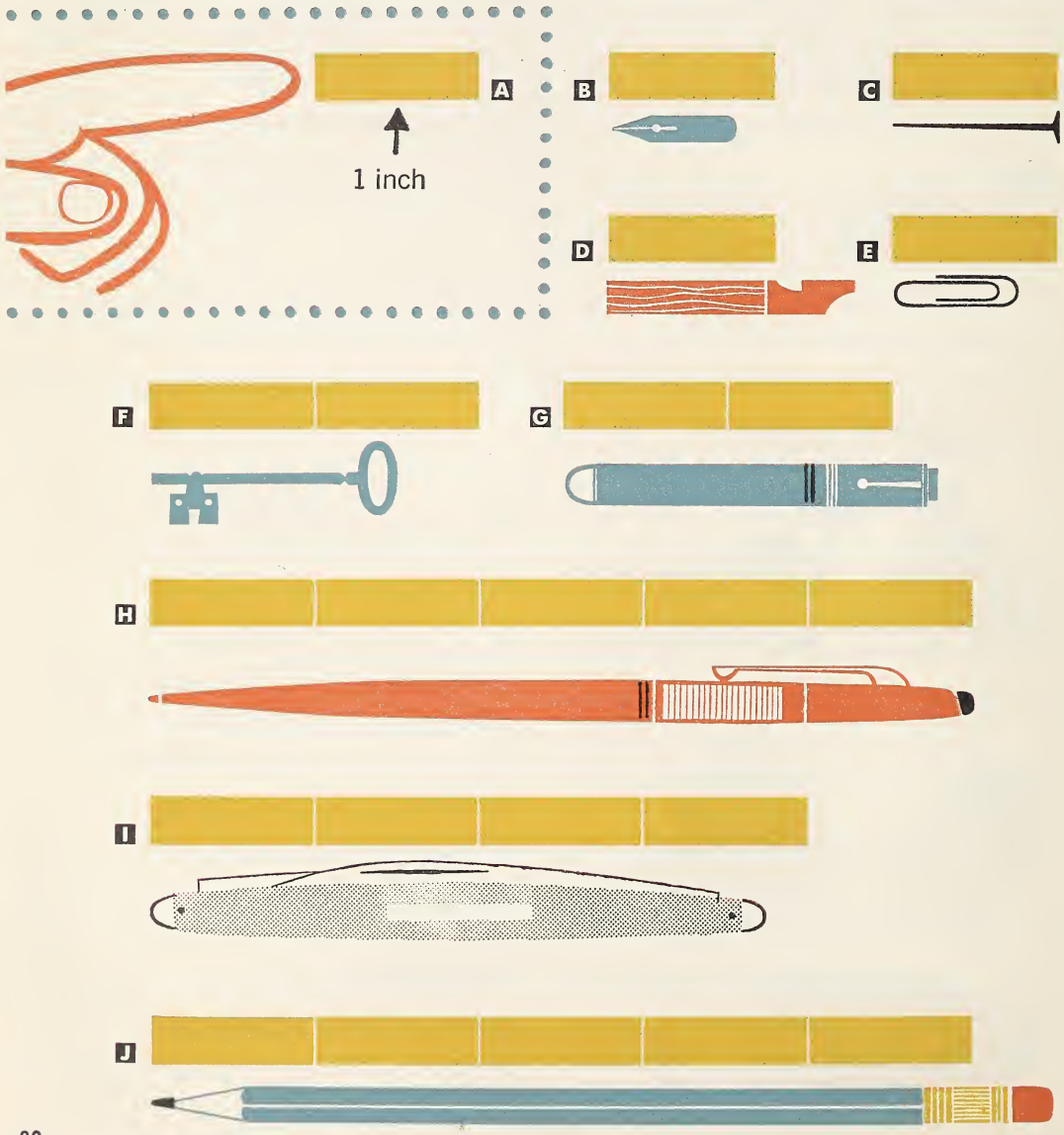
B June has 10 cents to spend. Should she buy 2 pieces of the candy in Picture A, or should she buy 3 pieces of the candy in Picture B? Why?

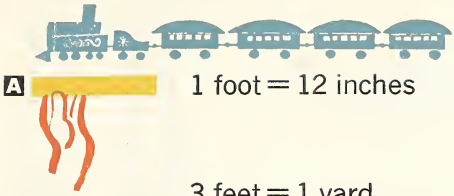
C Each day Ellen buys a peach that costs 2 cents. How much does one of the peaches cost today? Picture C shows you.

D Today Ellen has 25 cents. Should she buy 1 peach, 5 peaches, or 25 peaches? Why?

Moving forward

In this lesson you will learn how to measure, using inches, feet, yards, pints, quarts, and gallons.





A

1 foot = 12 inches

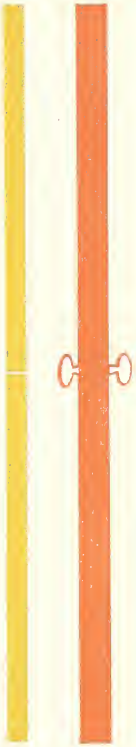
3 feet = 1 yard

36 inches = 1 yard

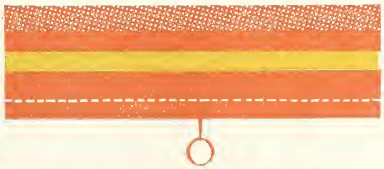
B

G

H



K



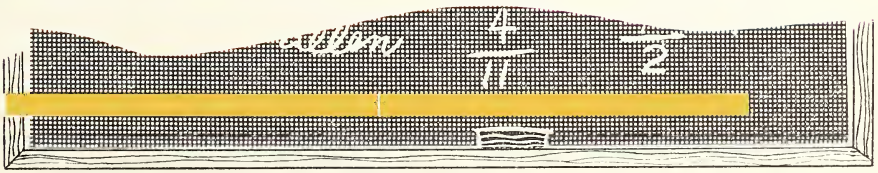
C

D

I

J

E



F

A

B

C

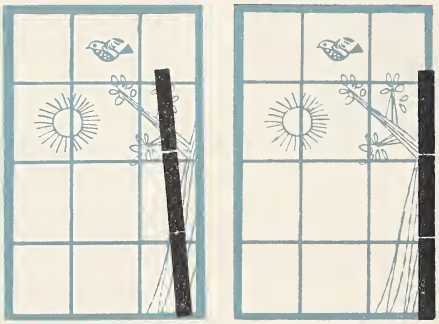
D

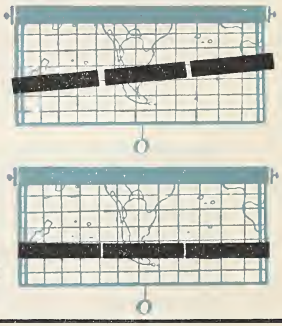
E

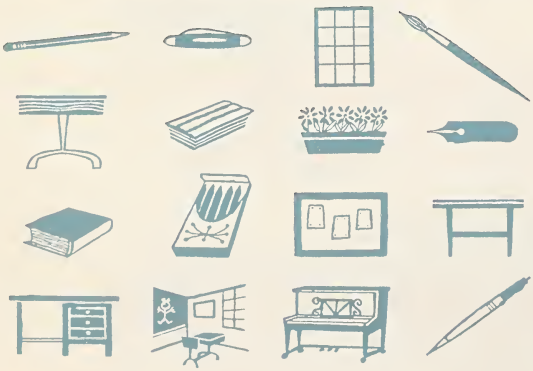
F

G

H


I


J



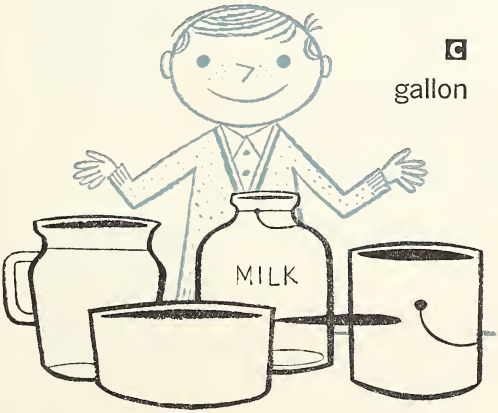
A Look at the pictures. Would you measure each of these things in inches, feet, or yards?

B In your schoolroom find as many of these things as you can. About how long or how wide do you think each of them is?

C Measure each thing you found. How long or how wide was it?

A
pint

B
quart



C
gallon

J

D

K

E

L

F

M

G

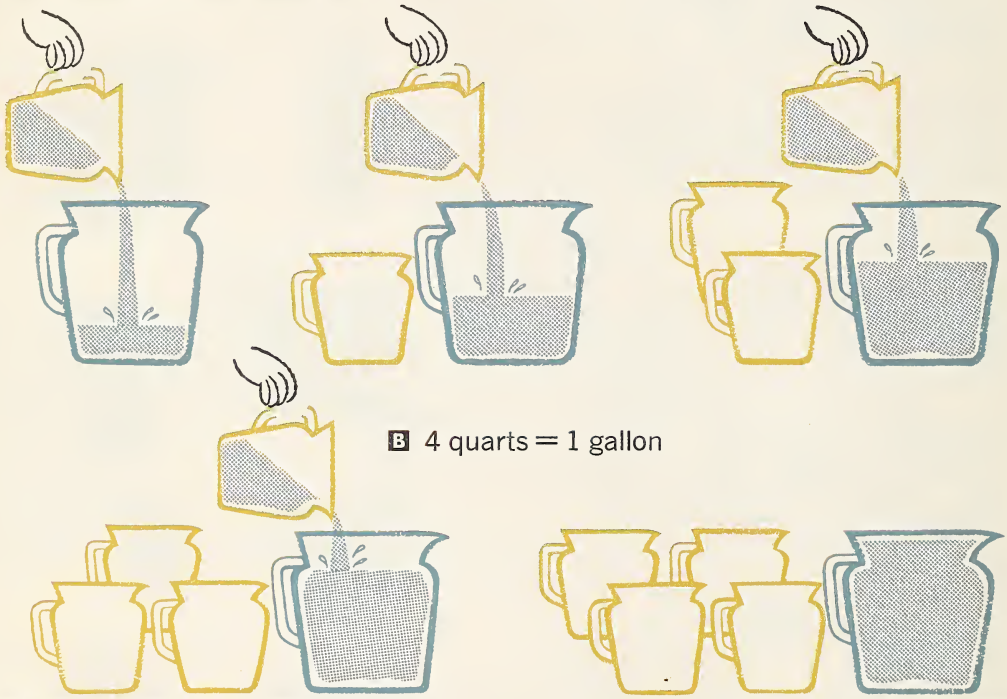
N

H

O

I

A 2 pints = 1 quart



B 4 quarts = 1 gallon

C 8 pints = 1 gallon

A 12 inches = 1 ~~~

B 3 feet = 1 ~~~

C 1 quart = ▒ pints

D 1 gallon = 8 ~~~

E 1 yard = ▒ feet

F 1 gallon = ▒ quarts

G 1 yard = 36 ~~~

H 1 gallon = 4 ~~~

I 1 quart = 2 ~~~

J 8 pints = 1 ~~~

K 1 foot = 12 ~~~

L 36 inches = 1 ~~~

A Mother had 8 pints of milk on one shelf and 3 pints of milk on another shelf. Mother had how many pints of milk altogether?

B A tree in Jack's yard is 11 feet tall. A tree in Don's yard is 8 feet tall. The tree in Jack's yard is how much taller than the tree in Don's yard?

C May took 2 quarts of milk to a picnic. Ellen took 3 quarts of milk. How many quarts in all did the girls take to the picnic?

D A toy barn is 15 inches wide. Is it more than 1 foot wide or less than 1 foot wide?

E A table is 30 inches high. Is it more than 1 yard high or less than 1 yard high?

F Will 1 gallon bottle hold more milk or less milk than 5 quart bottles?

G Ann has a doll that is 1 foot tall. Carol has a doll that is 14 inches tall. Which girl's doll is taller?

H June bought 1 gallon of milk. Ellen bought 3 quarts of milk. Which girl bought more milk?

I Carol measured a dollhouse. It was 3 feet wide. How many yards wide was it?

J A hammer is 9 inches long. Is it less than 1 foot long or more than 1 foot long?

K Ellen's mother used 1 gallon of milk in 3 days. How many pints of milk did she use?

L A box is 4 feet long. Is it more than 1 yard long or less than 1 yard long?

M A garden fence is 39 inches high. Is it more than 1 yard high or less than 1 yard high?

N One day Ann's mother used 4 quarts of milk. How many gallons of milk did she use that day?

O Will 3 pint bottles hold more milk or less milk than 1 quart bottle?

Now you should be able to measure, using inches, feet, yards, pints, quarts, and gallons.

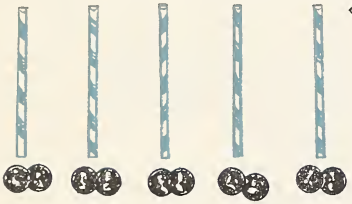
Exploring problems

The candy sticks cost 2¢ each. Nancy has 10 pennies to spend for candy. How many candy sticks can she buy?

A

Think of the pennies in groups of 2 because each candy stick costs 2¢.
There are ▒ groups of 2 pennies.

$10 \div 2 = \square$ There are 5 groups of 2.

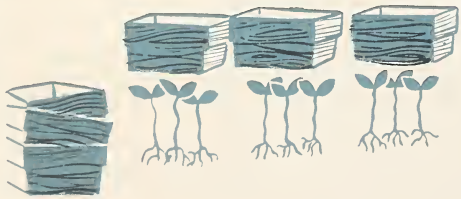


Put 1 candy stick with each group of 2 pennies.

$10 \div 2 = 5$ There are 5 groups of 2 pennies. So Nancy can buy 5 candy sticks.

Father has 9 plants to put into boxes. He will put 3 plants into each box. How many boxes will he need?

B



Think of the plants in groups of 3 because there will be 3 plants in each box.

$9 \div 3 = \square$ There are ▒ groups of 3. Father will need ▒ boxes.

Problems solved by division in which the number of equal groups is the number of items required to answer the problem

A June is putting 8 pieces of candy into bags. She is putting 4 pieces into each bag. How many bags does she need?

Think of the pieces of candy in groups of four. $8 \div 4 = \square$
There are $\square$ groups of 4.
June needs $\square$ bags.

B A bag of peanuts costs 5¢. Ellen has 10¢ to spend. How many bags of peanuts can she buy?

Find how many groups of 5 cents Ellen has. $10 \div 5 = \square$
She can buy $\square$ bags of peanuts.

C Some children bought 10 balloons in all. Each child bought 2. How many children bought the balloons?
$10 \div 2 = \square$

D Apples cost 3¢ each. How many apples can Jack buy with 9¢?
$9 \div 3 = \square$

E Bob's father gave 6 pennies to some children. He gave 2 pennies to each child. He gave the pennies to how many children?

F Jack put 8 toy firemen into boxes. He put 2 toy firemen into each box. How many boxes did he use?

G Don put 4 toy policemen into boxes. He put 2 toy policemen into each box. How many boxes did he use?

H A toy bell costs 3¢. How many bells can Ann buy with 6¢?

I A toy whistle costs 4¢. How many toy whistles can Tom buy with 8¢?

Sometimes when you divide to find the answer to a problem, the number of equal groups can mean the number of apples you can buy, the number of boxes you will need, and so on.

Keeping skillful

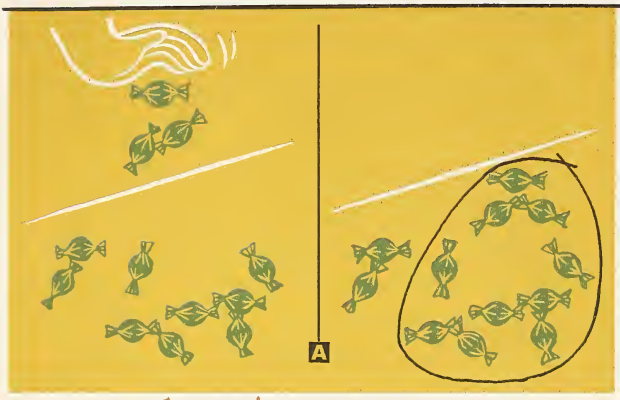
A $3+5=\square$
B $5+5=\square$
C $3\times2=\square$
D $4\div2=\square$
E $9-3=\square$
F $4+2=\square$
G $5-1=\square$
H $10\div2=\square$
I $4-3=\square$
J $2+5=\square$
K $3\times3=\square$
L $6\div2=\square$

A $4+\square=6$
B $3+\square=10$
C $6+\square=9$
D $3+\square=5$
E $6+\square=7$
F $4+\square=8$

A Multiply 2 by 5.
B Subtract 7 from 9.
C Add 8 to 2.
D Subtract 4 from 7.
E Divide 10 by 5.
F Add 3 to 7.

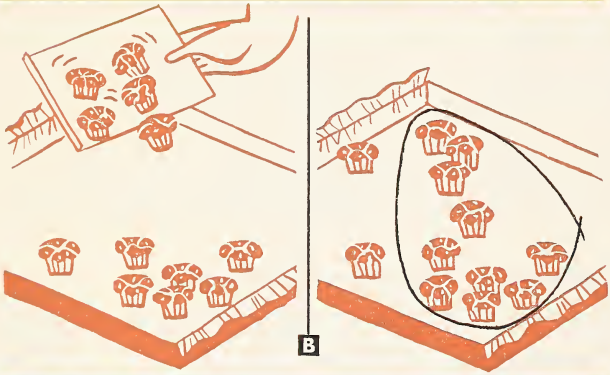
Moving forward

On pages 94 to 102 you will find out how to add and multiply to make 12. You will also learn how to subtract from 12 and how to divide 12.



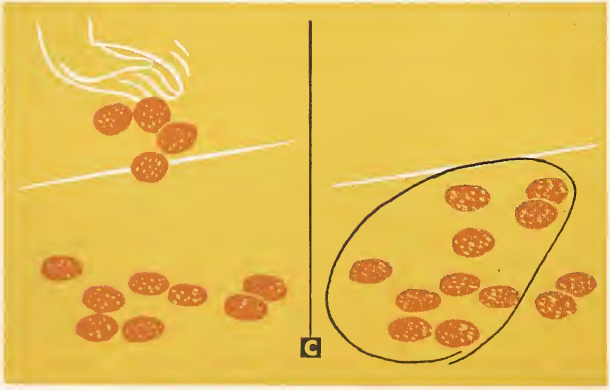
9 pieces of candy were on the table.
Ellen put 3 more pieces on the table.
Then there were ▒ pieces of candy on the table.

$9 + 3 = \square$



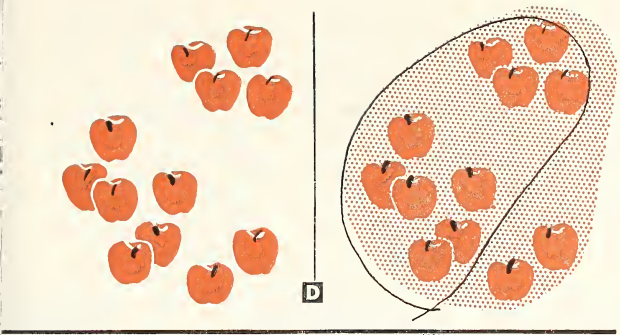
7 cupcakes were in the box.
Carol put 5 more cupcakes into the box.
Then there were ▒ cupcakes in the box.

$7 + 5 = \square$



8 cookies were on the table.
Mother put 4 more cookies on the table.
Then there were ▒ cookies on the table.

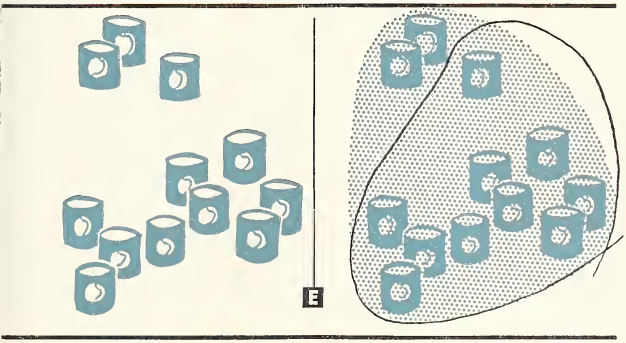
$8 + 4 = \square$



D

Nancy has 4 apples.
Ellen has 8 apples.
The girls have how many apples altogether?

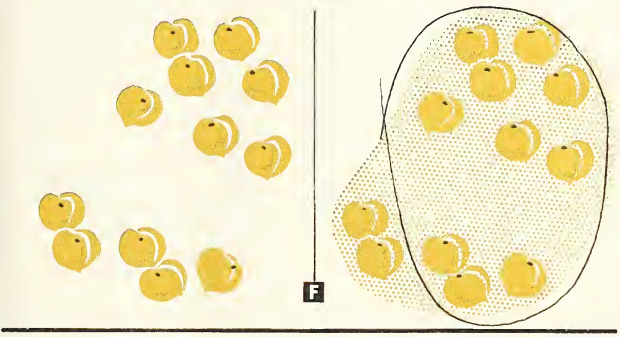
$4+8=\square$ $8+4=\square$



E

3 small cans of peaches were on one shelf.
9 small cans of peaches were on another shelf.
There were ▒ small cans of peaches in all.

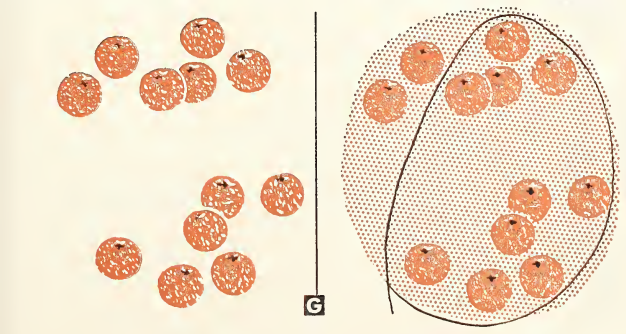
$3+9=\square$ $9+3=\square$



F

Ann's mother used 7 peaches for a shortcake.
Carol's mother used 5 peaches for her shortcake.
How many peaches in all did the mothers use?

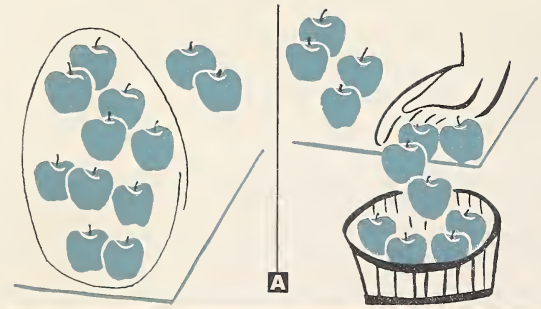
$7+5=\square$ $5+7=\square$



G

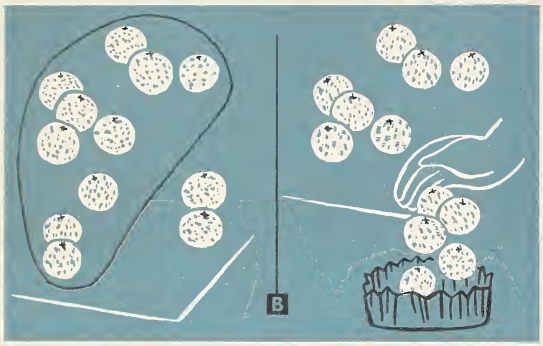
May's mother bought 6 oranges.
Betty's mother also bought 6 oranges.
The two mothers bought ▒ oranges in all.

$6+6=\square$



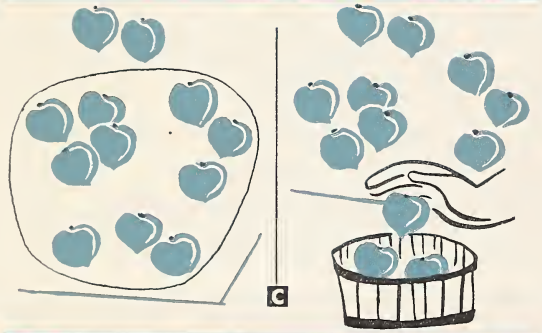
12 apples were on the shelf.
Now a man is putting 8 of them into a basket.
▒ apples will be left on the shelf.

$12 - 8 = \square$



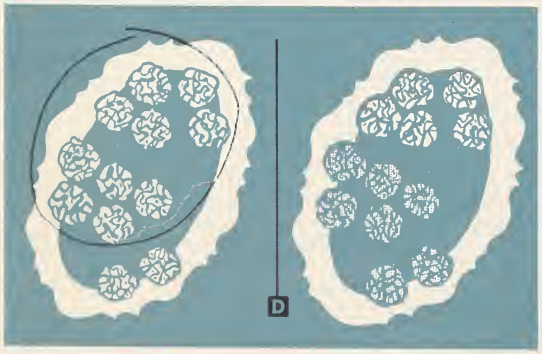
12 oranges were on the shelf.
Mother is buying 5 of them.
How many oranges will be left on the shelf?

$12 - 5 = \square$



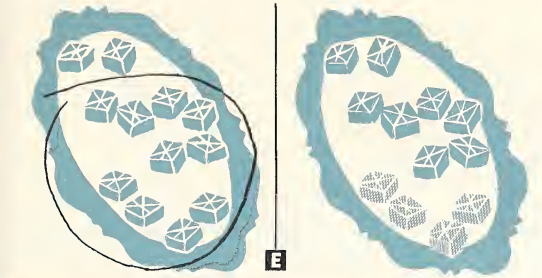
12 peaches were on the table.
Mother is buying 3 of them.
Then ▒ peaches will be left on the table.

$12 - 3 = \square$



There are 12 popcorn balls on the tray.
Nancy made 7 of them.
She bought the rest.
How many popcorn balls did she buy?

$12 - 7 = \square$

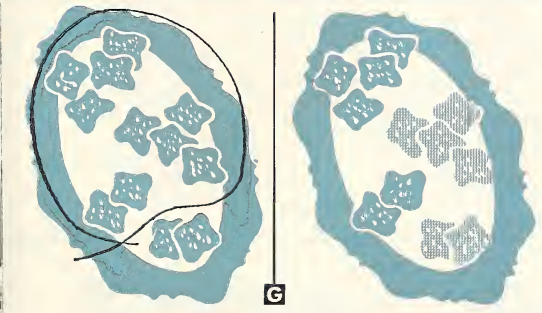


12 pieces of candy are on the tray.
4 of the pieces are for Tom.
The rest are for Ellen.
▒ pieces of candy are for Ellen.

$12-4=$▒

Mother put 12 cupcakes on a tray.
She took 9 of them from a box.
She took the others from a bag.
How many did she take from the bag?

$12-9=$▒

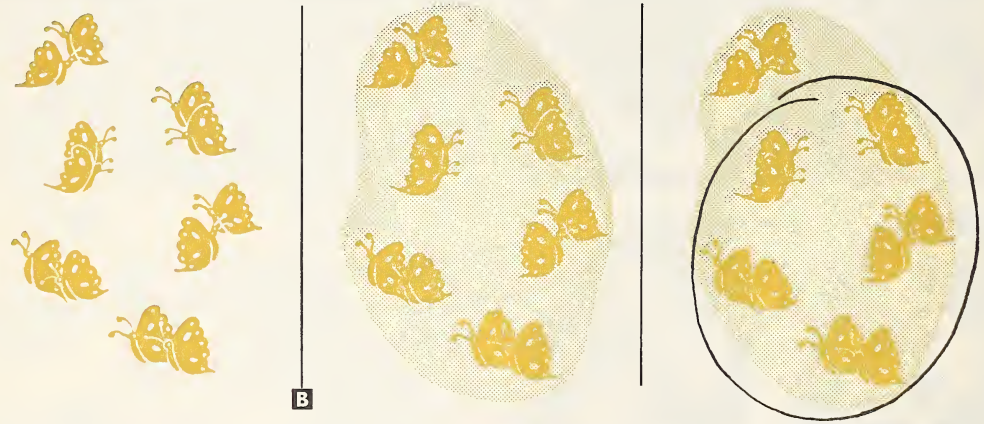


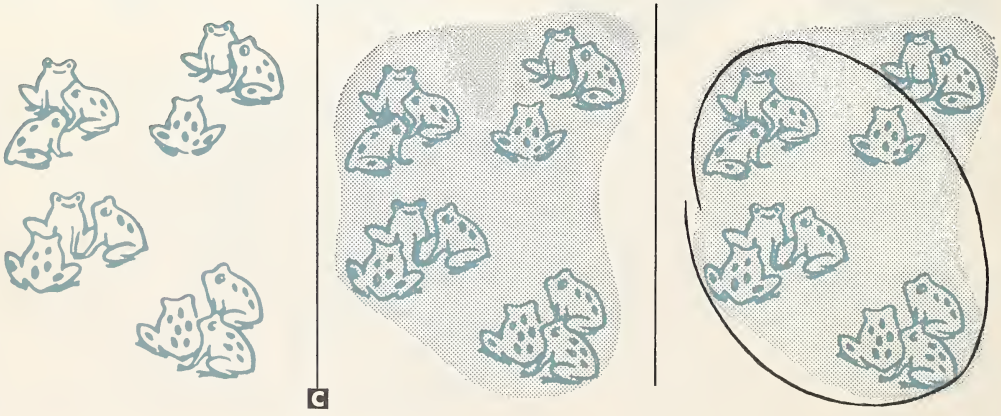
12 cookies are on the tray.
Mother made 6 of them for lunch.
Ann made the others.
Ann made ▒ cookies.

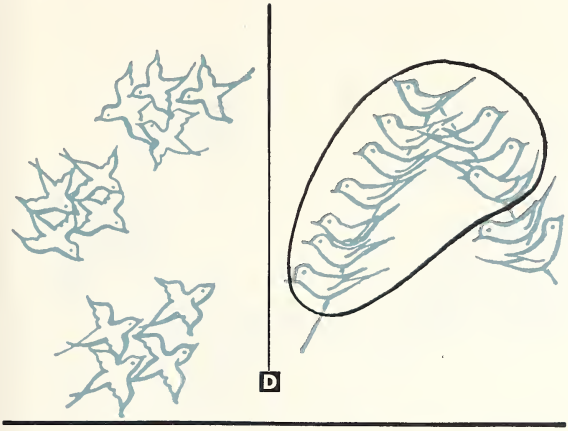
$12-6=$▒

A	$3+9=$▒	I	$12-4=$▒	A	$2+7=$▒	I	Add 9 to 3.
B	$12-5=$▒	J	$6+6=$▒	B	$10-7=$▒	J	Subtract 4 from 12.
C	$12-8=$▒	K	$12-9=$▒	C	$9+8=$▒	K	Subtract 6 from 12.
D	$4+8=$▒	L	$12-7=$▒	D	$13-9=$▒	L	Add 5 to 7.
E	$12-6=$▒	M	$8+4=$▒	E	$2+3=$▒	M	Add 6 to 5.
F	$7+5=$▒	N	$12-3=$▒	F	$17-9=$▒	N	Subtract 3 from 12.
G	$9+3=$▒	O	$5+7=$▒	G	$8-5=$▒	O	Add 4 to 8.
H	$12-7=$▒	P	$4+8=$▒	H	$5+6=$▒	P	Subtract 2 from 11.

A


B

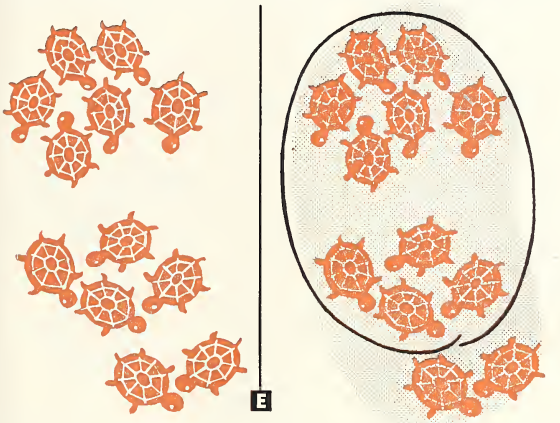

C



D

▒ groups of birds are flying.
▒ birds are in each group.
The birds flew to the barn.
Now how many birds are on the barn?

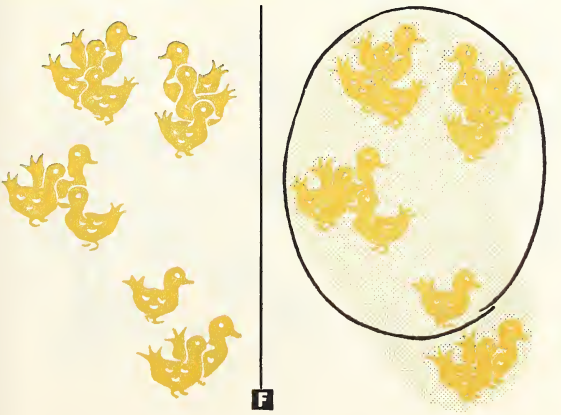
3 fours = ▒ 3 times 4 = ▒
4 multiplied by 3 = ▒
Multiply 4 by 3. 3 × 4 = ▒



E

There are ▒ groups of turtles.
▒ turtles are in each group.
There are ▒ turtles in all.

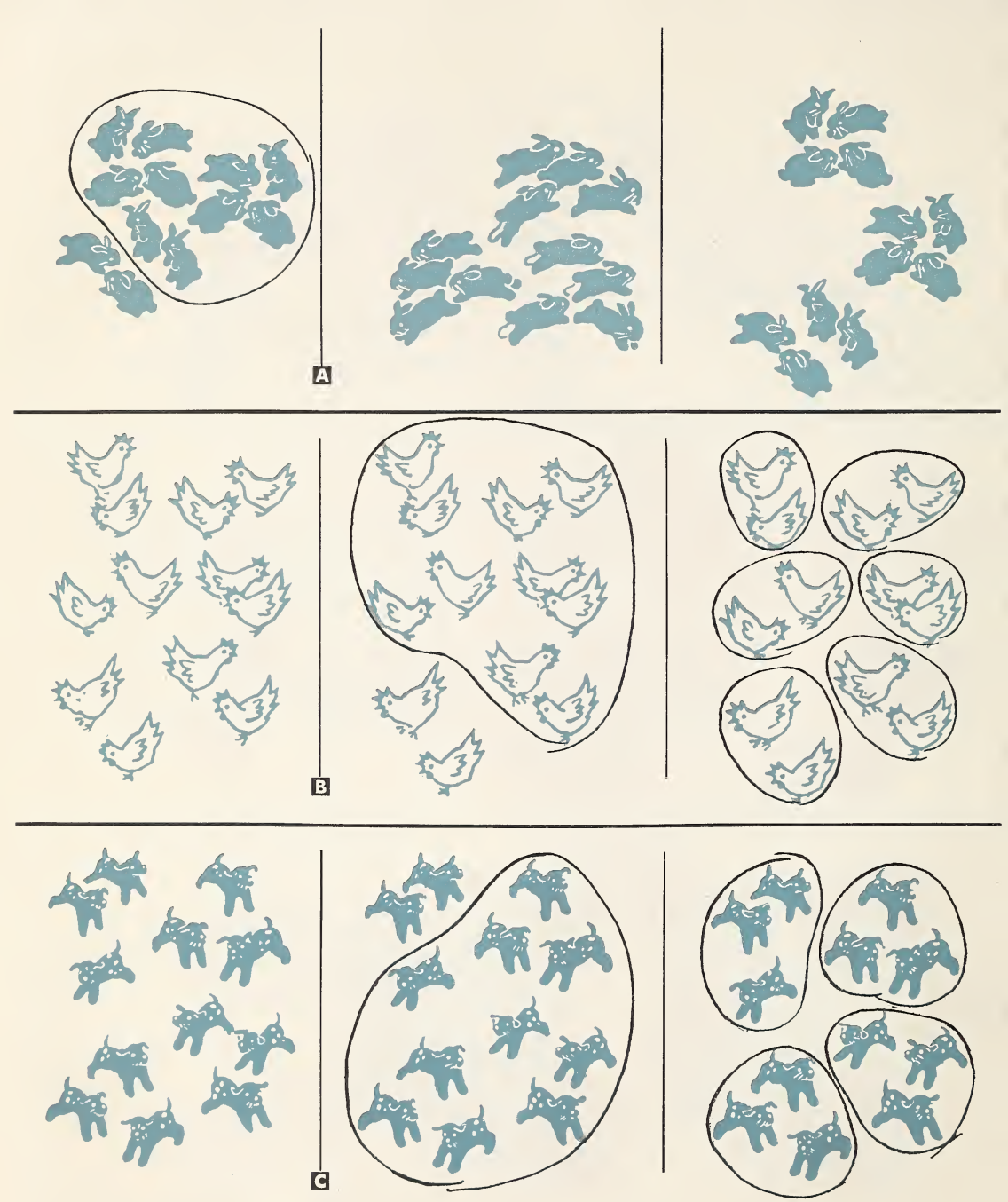
2 sixes = ▒ 2 times 6 = ▒
6 multiplied by 2 = ▒
Multiply 6 by 2. 2 × 6 = ▒

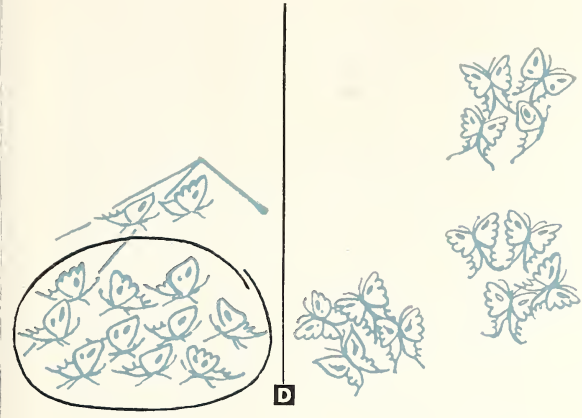


F

There are ▒ groups of ducks.
▒ ducks are in each group.
There are ▒ ducks in all.

4 threes = ▒ 4 times 3 = ▒
3 multiplied by 4 = ▒
Multiply 3 by 4. 4 × 3 = ▒

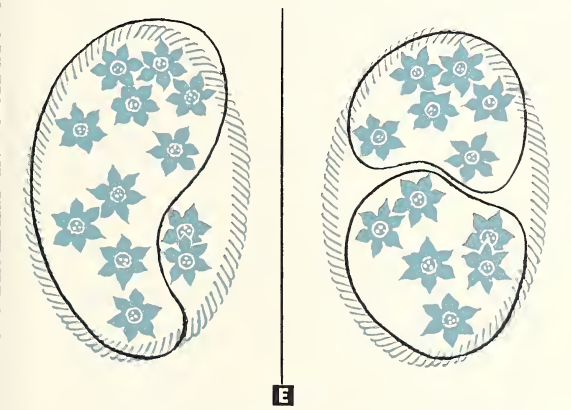

A
B
C



D

How many butterflies are there?
Now they are flying away
in groups of 4.
There are ▒ groups of 4 butterflies.

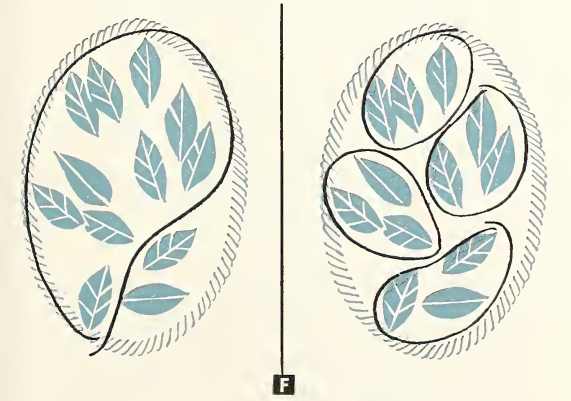
12 divided by 4 = ▒
Divide 12 by 4. $12 \div 4 =$ ▒



E

How many flowers are in the basket?
Betty is going to put them into vases.
She will put 6 flowers into each vase.
She needs ▒ vases for the flowers.

12 divided by 6 = ▒
Divide 12 by 6. $12 \div 6 =$ ▒



F

How many leaves are in the basket?
Jack is going to put them in a book.
He will put 3 leaves on each page.
He will use ▒ pages for the leaves.

12 divided by 3 = ▒
Divide 12 by 3. $12 \div 3 =$ ▒

A $12-8=$	L $5+7=$	A $17-9=$	L $5+8=$
B $4\times3=$	M $12\div6=$	B $3+8=$	M $17-8=$
C $6+6=$	N $12-9=$	C $13-5=$	N $6\times2=$
D $12-3=$	O $8+4=$	D $12\div2=$	O $13-6=$
E $12-7=$	P $2\times6=$	E $4+7=$	P $4+9=$
F $9+3=$	Q $3+9=$	F $9+8=$	Q $11-5=$
G $12\div4=$	R $12-4=$	G $12-9=$	R $8+5=$
H $4+8=$	S $12\div3=$	H $11-6=$	S $9+3=$
I $6\times2=$	T $7+5=$	I $8+9=$	T $3\times4=$
J $12-5=$	U $12-6=$	J $6+7=$	U $13-7=$
K $12\div2=$	V $3\times4=$	K $13-4=$	V $6+6=$

Now you should know how to add and multiply to make 12. You should also know how to subtract from 12 and how to divide 12.

Using arithmetic

A The children had a picnic. On the way to the picnic Jack counted 12 horses. Betty counted 9 horses. Jack counted how many more horses than Betty?

B Betty counted 8 lambs. 3 lambs were eating. The others were sleeping. How many of them were sleeping?

C A farmer had 11 white ducks and 9 brown ducks. He had how many fewer brown ducks than white ducks?

D There were 3 groups of tall trees in the farmer's yard. Each group had 2 trees in it. How many trees were in the yard?

E Nancy saw 7 ducks in one pond and 5 ducks in another pond. Nancy saw how many ducks in all?

F Jack's mother made 12 peanut butter sandwiches. The children ate 9 of them for lunch. How many sandwiches were left after lunch?

G Jack's mother made 6 cupcakes for lunch, and Betty's mother made 6 cupcakes. How many cupcakes did the two mothers make?

H Betty's mother bought 3 peaches from the farmer. Jack's mother bought 7 peaches from him. The two mothers bought how many peaches?

I Jack found 9 stones on the farm. He wanted 12 stones. How many more stones did he need to find?

J The farmer had 7 rabbits in a pen and 3 rabbits in the yard. He had how many rabbits in all?

K Nancy picked 17 flowers. She gave 9 of them to another girl. Then Nancy had how many flowers?

L Jack counted 13 butterflies and 7 birds. Jack counted how many more butterflies than birds?

M Nancy saw 10 birds in a tree. Four of the birds were brown, and the others were yellow. How many of them were yellow?

N On the way home Betty wanted to buy some chocolate candy. The candy cost 10¢. She had 7¢. How much more money did she need?

O Jack had 13 cents to spend. He bought a toy policeman that cost 8 cents. Then he had how much money?

Keeping skillful

For each of these problems draw the coins you would use in making change. Under each coin write the number you would say as you make change.

A Carol bought a sandwich for 15¢. She gave the man a quarter.

B Tom bought a book for 26¢. He gave the man a quarter and a nickel.

C Ellen bought a toy wagon for 38¢. She gave the man a half dollar.

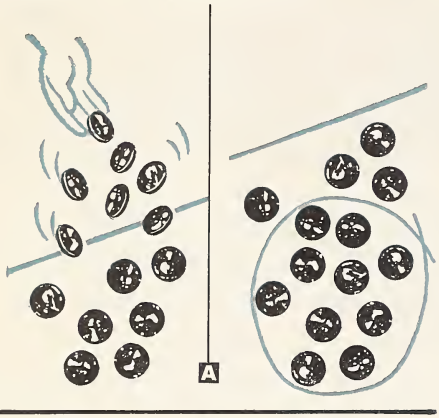
D June bought a balloon for 5¢. She gave the man a quarter.

E Don bought a boat for 27¢. He gave the man a half dollar.

A fifty-seven = 4 tens ▭ ones
B twenty-five = 1 ten ▭ ones
C ninety-one = ▭ tens ▭ ones
D forty-three = ▭ tens ▭ ones
E sixty-nine = ▭ tens ▭ ones
F seventy-four = ▭ tens ▭ ones
G thirty-eight = ▭ tens ▭ ones
H eighty-two = ▭ tens ▭ ones
I seventy-one = ▭ tens ▭ ones
J twenty-four = ▭ ten ▭ ones
K forty-four = ▭ tens ▭ ones
L ninety-six = ▭ tens ▭ ones
M sixty-five = ▭ tens ▭ ones
N seventy-two = ▭ tens ▭ ones
O fifty-three = ▭ tens ▭ ones
P eighty-nine = ▭ tens ▭ ones
Q twenty-two = ▭ ten ▭ ones

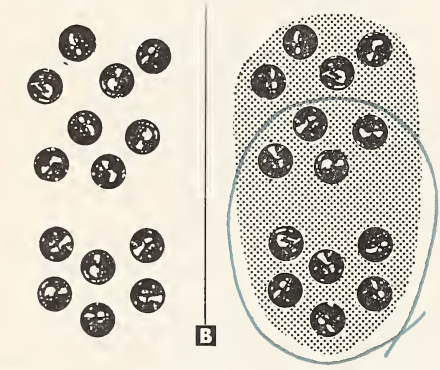
Moving forward

In this lesson you will learn to add and multiply to make 14. You will also learn to subtract from 14 and to divide 14.



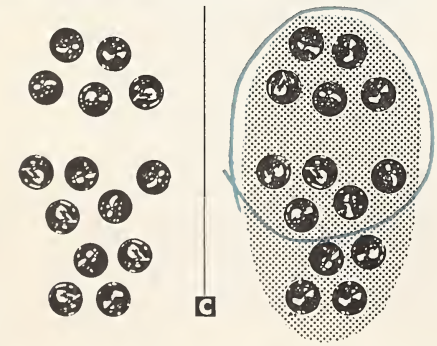
Dick had 7 pennies.
His father gave him 7 more pennies.
Then Dick had ▒ pennies.

$7 + 7 = \square$



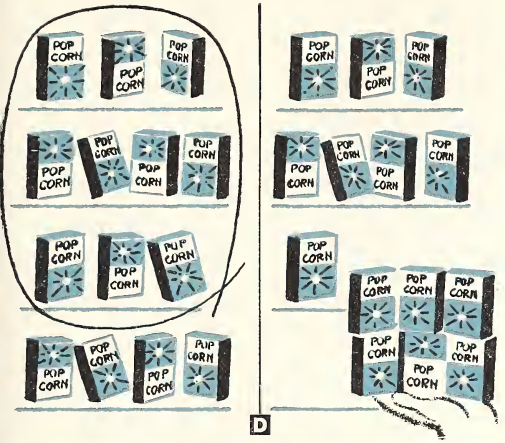
Ellen has 8 pennies.
Her sister has 6 pennies.
The two girls have ▒ pennies in all.

$8 + 6 = \square$ $\quad 6 + 8 = \square$



Betty has 5 pennies.
Her mother has 9 pennies.
She and Betty have ▒ pennies altogether.

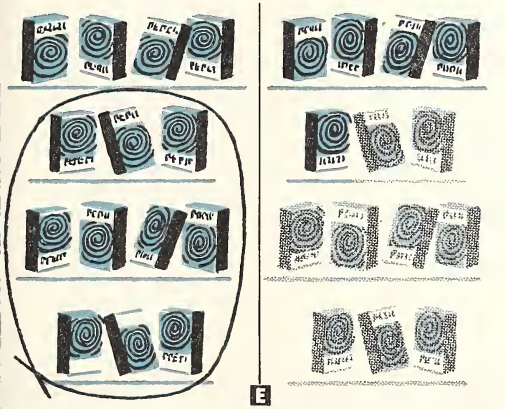
$5 + 9 = \square$ $\quad 9 + 5 = \square$



D

There are 14 boxes of popcorn
in the store.
Bob is buying 6 of them to take home.
Then how many boxes of popcorn
will be left in the store?

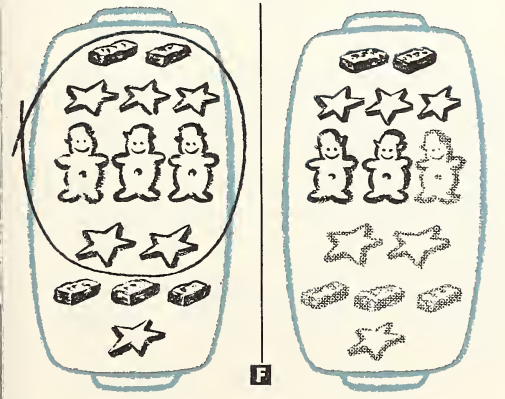
$14 - 6 = \square$



E

There are 14 boxes in the store.
9 boxes have candy in them.
The others have cookies in them.
How many boxes have cookies in them?

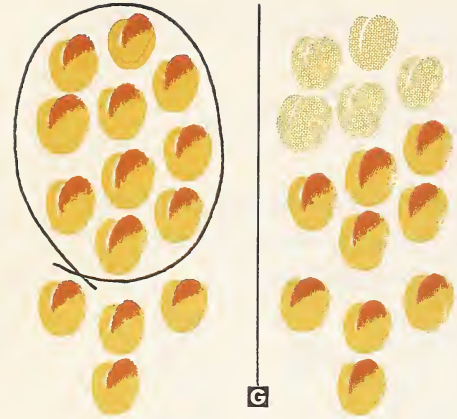
$14 - 9 = \square$



F

There are 14 cookies on the tray.
Carol cut out 7 of them.
Her sister cut out the others.
How many cookies did her sister cut out?

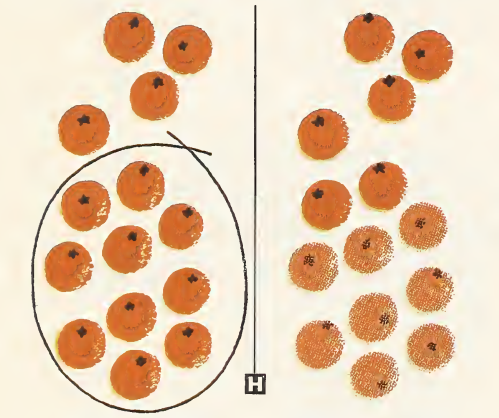
$14 - 7 = \square$



G

Mother has 14 peaches.
5 of them are for breakfast.
The others are for lunch.
How many peaches are there for lunch?

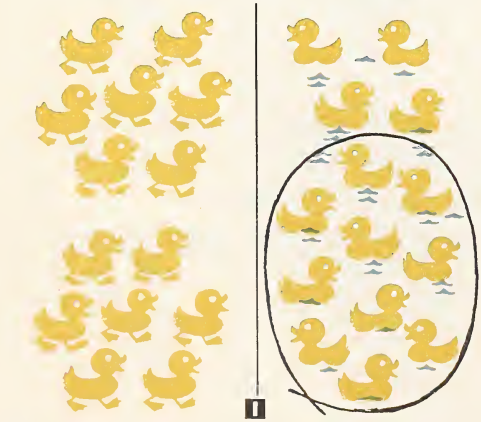
14 − 5 = ▒



H

The children bought 14 oranges.
They ate 8 of them on Monday
and the rest on Tuesday.
How many of the oranges did they eat
on Tuesday?

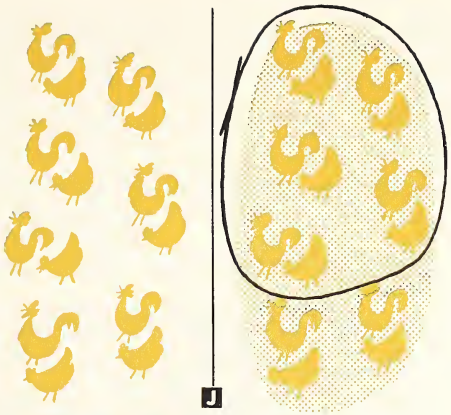
14 − 8 = ▒



I

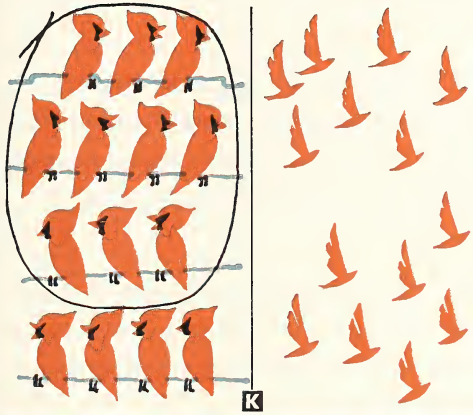
▒ groups of ducks are going to the pond.
There are ▒ ducks in each group.
Now how many ducks are in the pond?

2 sevens = ▒ 2 times 7 = ▒
7 multiplied by 2 = ▒
Multiply 7 by 2. 2 × 7 = ▒



There are ▒ groups of chickens.
How many chickens are in each group?
There are ▒ chickens in all.

7 twos = ▒ 7 times 2 = ▒
2 multiplied by 7 = ▒
Multiply 2 by 7. 7 × 2 = ▒



How many birds are on the fence?
Now they are flying away in groups of 7.
▒ groups of 7 birds are flying away.

14 divided by 7 = ▒
Divide 14 by 7. 14 ÷ 7 = ▒

▒ birds are in the big cage.
The man is going to put them into little cages.
He will put 2 birds into each cage.
How many cages will he need?
He will need 1 cage for each group of ▒ birds.

14 divided by 2 = ▒
Divide 14 by 2. 14 ÷ 2 = ▒

A $14-9=\square$
B $7\times2=\square$
C $7+7=\square$
D $14-6=\square$
E $14\div7=\square$
F $9+5=\square$
G $14-7=\square$
H $2\times7=\square$
I $8+6=\square$
J $14-5=\square$
K $5+9=\square$
L $14\div2=\square$
M $6+8=\square$
N $14-8=\square$

A Subtract 7 from 11.
B 9 plus 3 equals ▭.
C Multiply 2 by 6.
D Divide 10 by 5.
E 12 minus 5 equals ▭.
F Add 8 to 9.
G Subtract 6 from 13.
H $3\times4=\square$
I $10-8=\square$
J $5+6=\square$
K $12\div4=\square$
L $3+9=\square$
M $4\times2=\square$
N $11-4=\square$

Now you can add and multiply to make 14. You can also subtract from 14, and divide 14.

Using arithmetic

A Jack had 17¢ to spend at the circus, and Don had 9¢ to spend. Don had how many fewer cents to spend than Jack?

B The children saw 8 clowns. 3 of the clowns were riding ponies. The other clowns were marching. How many of them were marching?

C 7 elephants were in the ring. Then 5 more elephants marched into the ring. How many elephants were in the ring then?

D 4 bears were in a cage. A man put 3 more bears in the cage. Then how many bears were in the cage?

E Some ponies were running in the ring. They were running in groups of 2. Don counted 5 groups of ponies. How many ponies were running in the ring?

F Father bought a box of candy at the circus. There were 8 large pieces and 5 small pieces of candy in the box. How many pieces of candy were in the box?

G Bill had 12 cents to spend for balloons. The balloons cost 4 cents each. How many balloons could Bill buy?

H A bag of popcorn cost 11¢. Betty had 5¢. How many more cents did she need to buy the popcorn?

I A bag of peanuts that Dick wanted to buy cost 14¢. He had 9¢. How much more money did he need to buy the peanuts?

J 10 circus ponies were running in the ring. They separated into groups of 5. Then there were how many groups of circus ponies?

K There were 8 horses and 6 ponies in the circus ring. How many more horses than ponies were in the ring?

L 5 horses were marching in the ring. 5 more horses marched in. How many horses were in the ring then?

M 6 elephants and 8 bears were in another ring. There were how many fewer elephants than bears in the ring?

N A man sold 10 large boxes of popcorn to some children. Each child bought 2 boxes. How many children bought the popcorn?

O 2 groups of clowns were riding in cars. There were 5 clowns in each group. How many clowns were riding in cars?

P Eleven clowns were in the ring. Five clowns carried balloons. The rest did not. How many clowns did not carry balloons?

Q 3 groups of 4 elephants each marched into the ring. How many elephants marched into the ring?

R 11 clowns came in. 7 of them had firemen's hats. How many more firemen's hats were needed for all the clowns to have firemen's hats?

S 12 dogs were running in the ring. 8 of them were brown. The others were white. How many were white?

T 8 ponies were marching in the ring. More ponies marched into the ring. Don counted 11 ponies. How many more ponies had marched in?

Thinking straight

This is a number puzzle. One figure is missing in each number. Can you think of some figure to use so that each number will be larger than the number before it?

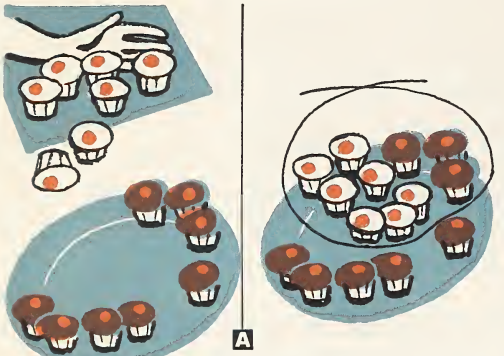
A _1	E 5_	I _0	M _1
B 2_	F _5	J _7	N 8_
C 2_	G _8	K 6_	O _9
D _3	H 5_	L _2	P 9_

In this number puzzle, one figure is missing in each number also. Can you think of some figure to use so that each number will be smaller than the number before it?

A 8_	E _9	I _2	M _3
B _1	F 6_	J 5_	N 2_
C _5	G _8	K 4_	O 2_
D 7_	H 5_	L _6	P 1_

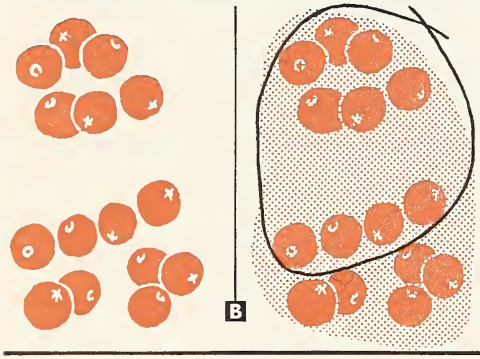
Moving forward

In this lesson you will learn to add and multiply to make 15. You will also learn to subtract from 15 and to divide 15.



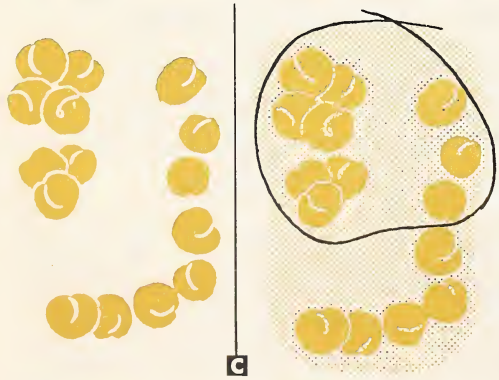
8 cupcakes were on the plate.
Mother put 7 more cupcakes on the plate.
Then how many cupcakes were on the plate?

$8 + 7 = \square$



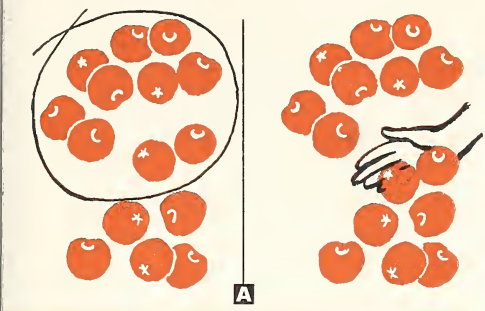
June bought 6 oranges.
Nancy bought 9 oranges.
The two girls bought how many oranges?

$6 + 9 = \square$ $9 + 6 = \square$



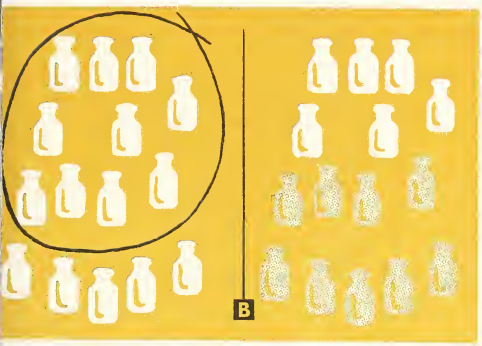
Jack carried 7 peaches to help Mother.
Bill carried 8 peaches to help Mother.
How many peaches did the boys carry in all?

$7 + 8 = \square$ $8 + 7 = \square$



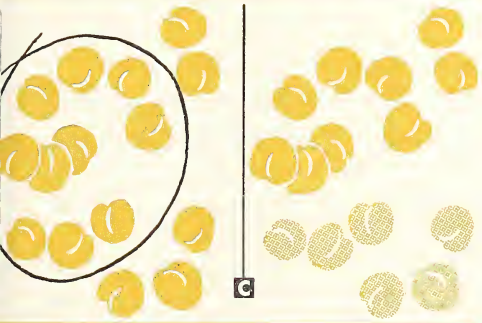
15 apples are on the lunchroom table.
Don is taking 7 of them away.
How many apples will be left on the table?

$15 - 7 = \square$



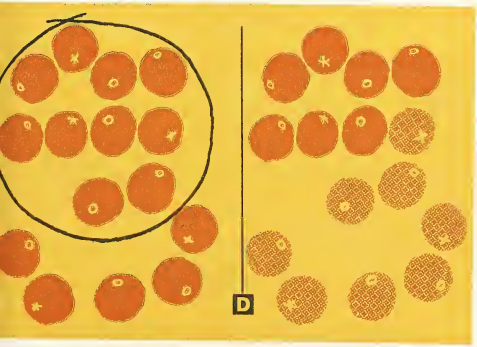
There are 15 bottles of milk
on the lunchroom table.
9 of them are sold.
The others are not sold.
How many bottles of milk are not sold?

$15 - 9 = \square$



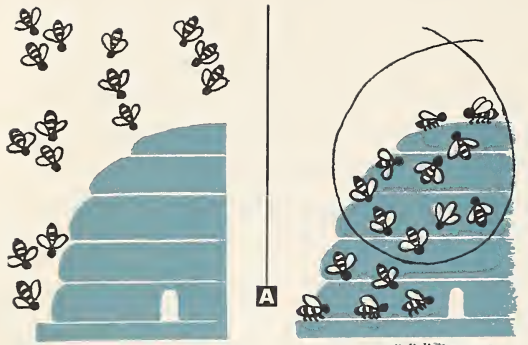
15 peaches are in the lunchroom.
6 of them are sold.
The others are not sold.
How many peaches are not sold?

$15 - 6 = \square$



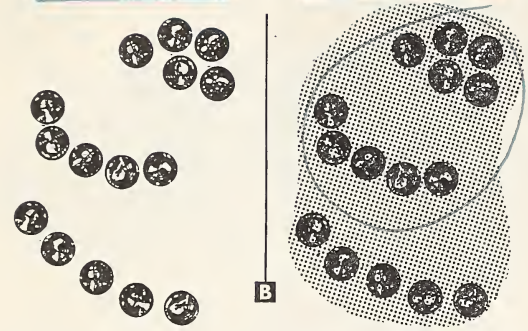
Mary has 15 oranges in the lunchroom.
She got 8 of them from a shelf.
She got the others from a box.
How many did she get from the box?

$15 - 8 = \square$



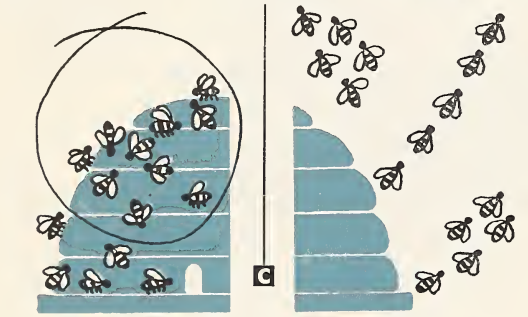
▒ groups of bees are flying to the hive.
How many bees are in each group?
Now how many bees are on the hive?

5 threes = ▒ 5 times 3 = ▒
3 multiplied by 5 = ▒
Multiply 3 by 5. 5 × 3 = ▒



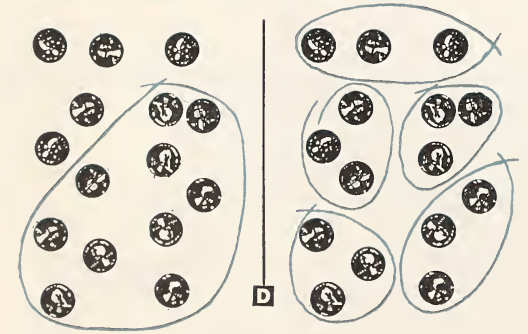
How many groups of pennies are there?
There are ▒ pennies in each group.
There are ▒ pennies in all.

3 fives = ▒ 3 times 5 = ▒
5 multiplied by 3 = ▒
Multiply 5 by 3. 3 × 5 = ▒



How many bees are on the hive?
Now they are flying away in groups of 5.
They are flying away in ▒ groups of five.

15 divided by 5 = ▒
Divide 15 by 5. 15 ÷ 5 = ▒



Don's ▒ pennies are on the table.
He is going to buy pieces of candy.
Each piece of candy costs 3 pennies.
How many pieces of candy can Don buy?

15 divided by 3 = ▒
Divide 15 by 3. 15 ÷ 3 = ▒

A $5 \times 3 =$ ▒	G $15 \div 5 =$ ▒	A Divide 14 by 2.	G $4 + 9 =$ ▒
B $7 + 8 =$ ▒	H $15 - 9 =$ ▒	B Subtract 7 from 12.	H $12 \div 3 =$ ▒
C $15 - 6 =$ ▒	I $8 + 7 =$ ▒	C 8 plus 6 equals ▒.	I $15 - 6 =$ ▒
D $15 \div 3 =$ ▒	J $3 \times 5 =$ ▒	D Multiply 4 by 3.	J $3 \times 4 =$ ▒
E $9 + 6 =$ ▒	K $15 - 7 =$ ▒	E Divide 12 by 6.	K $17 - 8 =$ ▒
F $15 - 8 =$ ▒	L $6 + 9 =$ ▒	F Add 9 to 6.	L $5 + 8 =$ ▒

Now you should be able to add and multiply to make 15. You should also know how to subtract from 15 and how to divide 15.

Using arithmetic

A Mother made 12 sandwiches and put them into bags for a picnic lunch at a farm. She put 2 sandwiches into each bag. How many bags did she use?

B She put 9 cups into the picnic basket. Six of them were red, and the others were yellow. How many of the cups were yellow?

C She had 8 apples and 6 peaches for the picnic. She had how many fewer peaches than apples?

D Mother put 15 cookies into bags. She put 3 cookies into each bag. How many bags did she use?

E On the way, the children counted animals. Mary counted 8 horses, and Don counted 7 pigs. How many animals did they count in all?

F Jack counted 11 sheep. His sister counted 6 sheep. Jack counted how many more sheep than his sister?

G The farmer showed the children the farm animals. He had 15 cows. Six of them were in a field. The others were in the barn. How many cows were in the barn?

H The children also saw his ducks. Six of them were in the pond, and eight were on the bank. How many ducks did the children see in all?

I The farmer planted 3 groups of trees, with 2 trees in each group. How many trees did he plant?

J Nancy saw 3 groups of birds in a tree. There were 5 birds in each group. How many birds in all did Nancy see in the tree?

K Five kittens were in one box in the barn, and three kittens were in another box. How many kittens in all were in the boxes?

L Six of the kittens were black, and two were white. There were how many fewer white kittens than black ones?

M Mary counted 15 blackbirds on a fence. Seven blackbirds flew away. How many blackbirds were left on the fence?

N The children counted 7 groups of chickens. There were 2 chickens in each group. How many chickens did the children count in all?

O Mother put 4 groups of cookies on the lunch table. There were 3 cookies in each group. How many cookies did she put on the table?

P The farmer put 8 apples into a box that would hold 15 apples. How many more apples could the farmer have put into the box?

Q The farmer said, "I had 3 beehives. Then I bought some more. Now I have 8 beehives." How many more beehives did he buy?

R He also said, "I have nine sheep and eleven lambs." He had how many more lambs than sheep?

Keeping skillful

A 3 tens 27 ones = ▭ tens 7 ones

B 58 = 4 tens ▭ ones

C 61 = ▭ tens 11 ones

D 5 tens 43 ones = 9 tens ▭ ones

E 1 ten 21 ones = ▭ tens 1 one

F 97 = 8 tens ▭ ones

G 49 = ▭ tens 19 ones

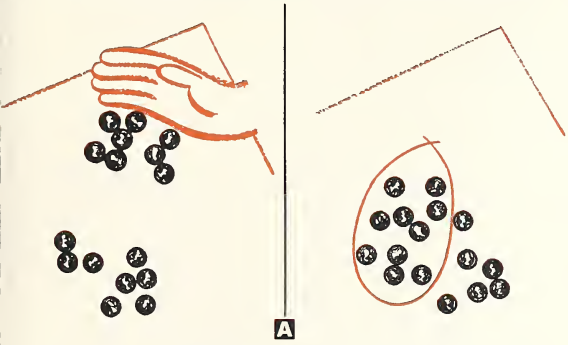
H 7 tens 22 ones = 9 tens ▭ ones

I 6 tens 35 ones = ▭ tens 5 ones

A $15 \div 5 =$ ▭	**A** $11 - 9 =$ ▭	**A** $3 \times 5 =$ ▭
B $6 + 7 =$ ▭	**B** $14 \div 7 =$ ▭	**B** $11 - 2 =$ ▭
C $17 - 9 =$ ▭	**C** $17 - 8 =$ ▭	**C** $14 - 9 =$ ▭
D $6 \times 2 =$ ▭	**D** $6 + 8 =$ ▭	**D** $7 + 6 =$ ▭
E $9 + 8 =$ ▭	**E** $8 + 3 =$ ▭	**E** $12 \div 3 =$ ▭
F $15 - 9 =$ ▭	**F** $2 \times 6 =$ ▭	**F** $4 + 7 =$ ▭
G $8 + 4 =$ ▭	**G** $14 - 5 =$ ▭	**G** $12 - 5 =$ ▭
H $12 \div 4 =$ ▭	**H** $9 + 4 =$ ▭	**H** $7 \times 2 =$ ▭
I $13 - 8 =$ ▭	**I** $12 \div 2 =$ ▭	**I** $15 - 6 =$ ▭
J $4 \times 3 =$ ▭	**J** $5 + 6 =$ ▭	**J** $8 + 5 =$ ▭
K $15 \div 3 =$ ▭	**K** $3 \times 4 =$ ▭	**K** $11 - 6 =$ ▭
L $13 - 5 =$ ▭	**L** $14 \div 2 =$ ▭	**L** $6 + 6 =$ ▭
M $12 \div 6 =$ ▭	**M** $9 + 5 =$ ▭	**M** $2 \times 7 =$ ▭
N $5 \times 3 =$ ▭	**N** $12 - 8 =$ ▭	**N** $14 - 8 =$ ▭

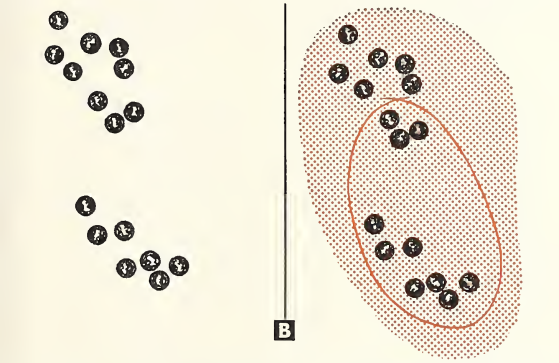
Moving forward

In this lesson you will learn to add and multiply to make 16. You will also learn to subtract from 16 and to divide 16.



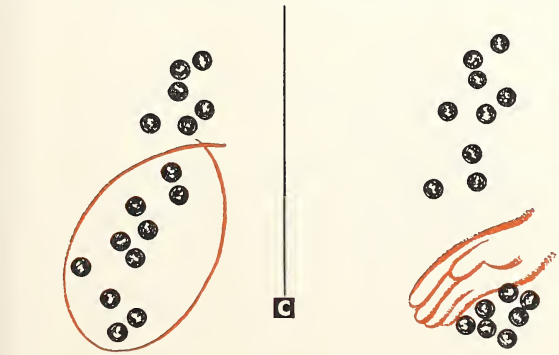
Betty had 8 pennies yesterday.
Today she earned 8 more pennies by helping Mother make the beds.
Now she has ▒ pennies.

$8 + 8 = ▒$



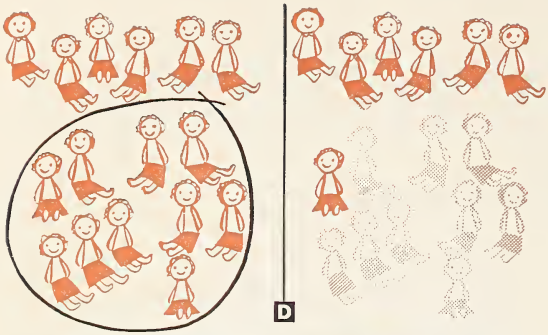
Jack earned 9 cents because he helped Father carry packages.
Don earned 7 cents because he helped Father carry packages.
The boys earned ▒ cents in all.

$9 + 7 = ▒$ $7 + 9 = ▒$



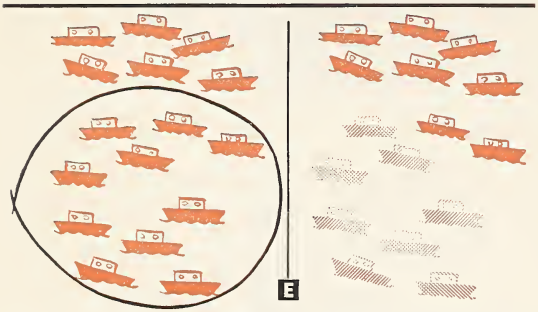
Bill earned 16 cents by carrying packages home for Mother.
He is using 7 cents to buy candy.
He will have ▒ cents left.

$16 - 7 = ▒$



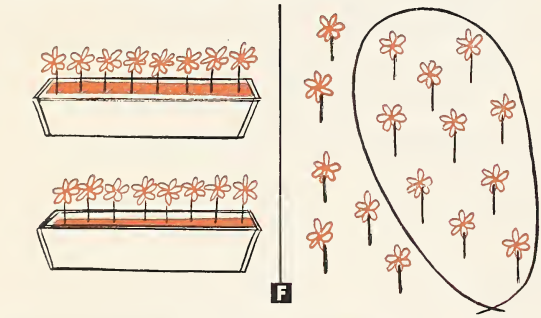
Betty and Carol bought 16 dolls.
Betty bought 9 of the dolls.
Carol bought the others.
How many dolls did Carol buy?

$16 - 9 = \square$



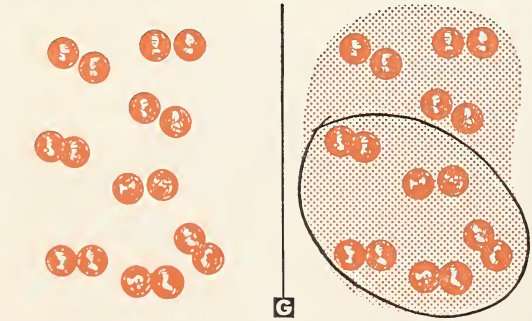
Yesterday Bill and Don bought
16 small boats.
Bill bought 8 of them.
Don bought the others.
How many boats did Don buy?

$16 - 8 = \square$



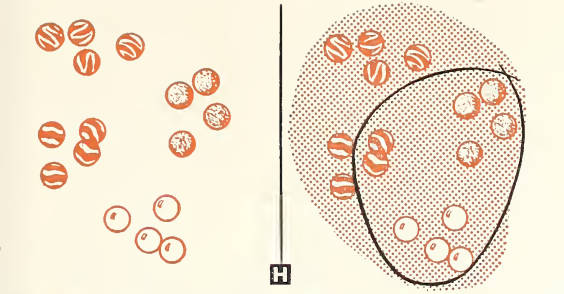
Mary bought 2 boxes of flowers.
There were 8 flowers in each box.
She bought ▒ groups of flowers.
▒ flowers were in each group.
She planted the flowers together.
She planted ▒ flowers.

Multiply 8 by 2. $2 \times 8 = \square$



The pennies Nancy earned today
are on a table.
She earned ▒ groups of pennies.
There are ▒ pennies in each group.
She earned ▒ pennies in all.

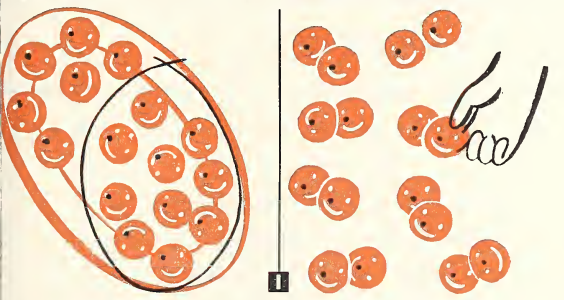
Multiply 2 by 8. $8 \times 2 = \square$



H

Dick has 4 kinds of marbles.
He has 4 marbles of each kind.
He has ▒ groups of marbles.
▒ marbles are in each group.
He has ▒ marbles in all.

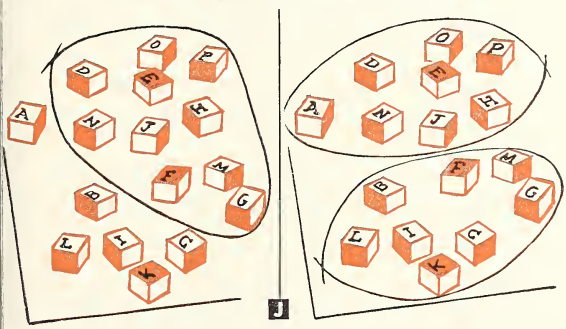
Multiply 4 by 4. $4 \times 4 = \square$



I

The ▒ cookies June made are on the plate.
Now she is putting them into groups.
▒ cookies are in each group.
There are ▒ groups of 2.

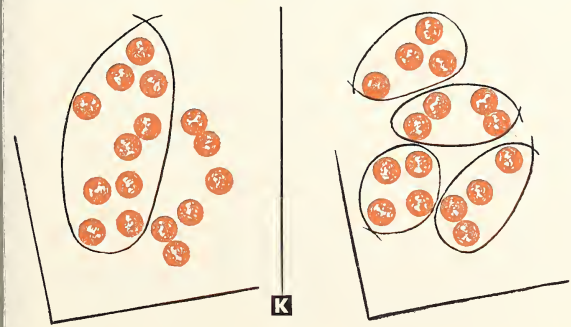
Divide 16 by 2. $16 \div 2 = \square$



J

There are ▒ blocks on the table.
Tom is going to put them in groups of 8.
Then there will be ▒ groups of blocks.

Divide 16 by 8. $16 \div 8 = \square$



K

Ellen is going to buy candy with the pennies on the table.
Each piece of candy costs 4 pennies.
Ellen can buy ▒ pieces of candy.

Divide 16 by 4. $16 \div 4 = \square$

A	$4 \times 4 =$ ▒	G	$7 + 9 =$ ▒	A	11 minus 6 = ▒	G	$7 + 8 =$ ▒
B	$9 + 7 =$ ▒	H	$16 \div 2 =$ ▒	B	Divide 12 by 2.	H	$10 \div 2 =$ ▒
C	$16 - 8 =$ ▒	I	$16 - 9 =$ ▒	C	Add 2 to 7.	I	$12 - 9 =$ ▒
D	$16 \div 8 =$ ▒	J	$8 + 8 =$ ▒	D	Subtract 6 from 13.	J	$2 \times 4 =$ ▒
E	$8 \times 2 =$ ▒	K	$2 \times 8 =$ ▒	E	Multiply 5 by 2.	K	$6 + 9 =$ ▒
F	$16 - 7 =$ ▒	L	$16 \div 4 =$ ▒	F	8 divided by 2 = ▒	L	$7 \times 2 =$ ▒

Now you should understand how to add and multiply to make 16. You should also understand how to subtract from 16 and how to divide 16.

Using arithmetic

A Nancy made 16 chocolate cookies for a party. She put 9 of them into a box and the others on a plate. How many did she put on the plate?

B She picked 7 red flowers and 9 white ones for the table. She picked how many fewer red flowers than white ones?

C She put the 16 flowers in vases. She put 8 flowers in each vase. How many vases did she use?

D Nancy put 2 groups of candles on the tables. There were 3 candles in each group. How many candles did she put on the tables?

E Nancy bought 7 bottles of chocolate milk for the party. Her mother said, "You will need 10 bottles in all." How many more bottles should Nancy buy?

F 12 pieces of chocolate candy and 8 pieces of white candy were on a plate. There were how many more pieces of chocolate candy than white candy on the plate?

G Nancy put 6 cups on the table. She said, "I should get more cups, because there will be 10 girls at the party." How many more cups should she get?

H 5 girls came to the party in one car. 4 came in another car. How many girls came in the two cars?

I Nancy showed the girls 4 groups of dolls. There were 3 dolls in each group. How many dolls were there in all?

J The 10 girls separated into groups of 5 to play a game. How many groups of girls were there?

K Betty and Nancy played with two groups of paper dolls. There were 4 paper dolls in each group. How many paper dolls did Betty and Nancy play with?

L Four of the 10 girls played jacks. The others did not. How many girls did not play jacks?

M The girls played with Nancy's new kittens. She had 2 kittens in the house and 4 more kittens in the yard. She had how many kittens in all?

N Nancy had 16 balloons in a box. She took 9 of them out of the box. How many balloons did she keep in the box?

O Nancy put the 9 balloons in bunches of three. How many bunches of balloons did she make?

P Six of the 10 girls ate at the big table. The others ate at a little table. How many girls ate at the little table?

Q There were 16 pieces of birthday cake. The girls ate 9 pieces in all. How many pieces of birthday cake were left after the party?

R Mary gave Nancy 10 cents on her birthday. Nancy bought toy spoons with the money. Each spoon cost 2 cents. How many spoons did Nancy buy?

Keeping skillful

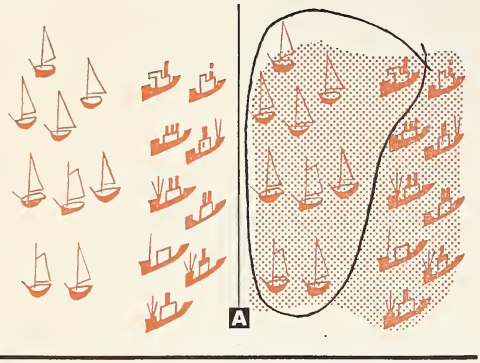
A 72 = 6 tens ▒ ones
B 45 = ▒ tens 15 ones
C 91 = ▒ tens 11 ones
D 28 = 1 ten ▒ ones
E 54 = 4 tens ▒ ones
F 69 = ▒ tens 19 ones
G 33 = 2 tens ▒ ones
H 86 = ▒ tens 16 ones
I 77 = 6 tens ▒ ones
J 53 = 4 tens ▒ ones
K 49 = ▒ tens 19 ones
L 94 = ▒ tens 14 ones

M 1 ten 15 ones = ▒ tens 5 ones
N 4 tens 38 ones = 7 tens ▒ ones
O 2 tens 23 ones = ▒ tens 3 ones
P 8 tens 16 ones = 9 tens ▒ ones
Q 3 tens 47 ones = ▒ tens 7 ones
R 6 tens 38 ones = 9 tens ▒ ones

A $3 \times 5 = \square$
B $7 + \square = 12$
C $5 + 9 = \square$
D $8 \times 2 = \square$
E $14 \div 2 = \square$
F $12 - 8 = \square$
G $4 + \square = 13$
H $6 \div 3 = \square$
I $2 \times 5 = \square$
J $4 + \square = 9$
K $2 \times 6 = \square$
L $15 - 8 = \square$

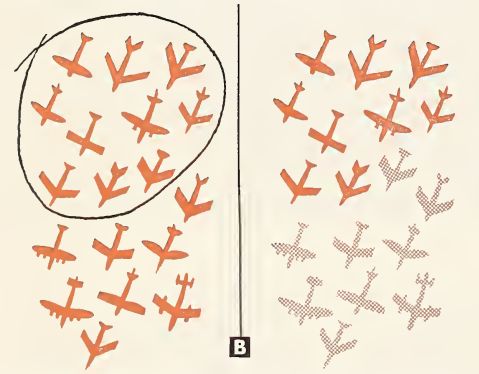
Moving forward

On pages 120 to 123 you will learn how to add and multiply to make 18. You will also learn how to subtract from 18 and how to divide 18.



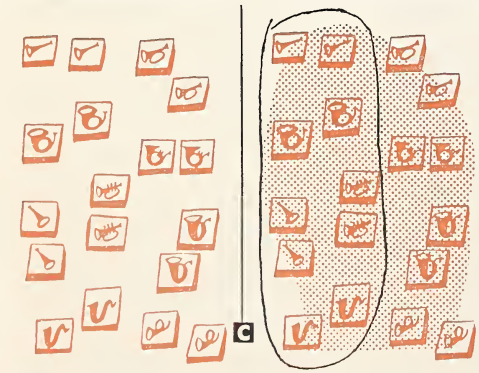
Jack has 9 boats.
Dick also has 9 boats.
The two boys have how many boats in all?

$9 + 9 = \square$



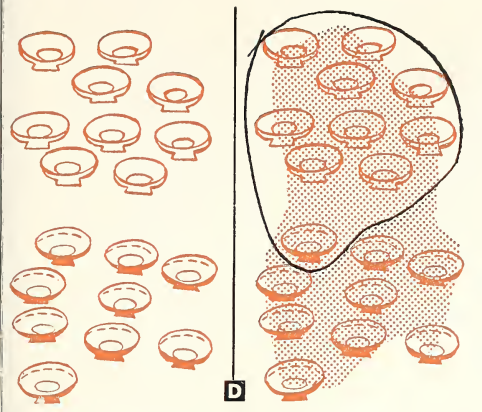
Dick has 18 small airplanes.
His sister gave him 9 of them.
His father gave him the others.
How many small airplanes did his father give him?

$18 - 9 = \square$



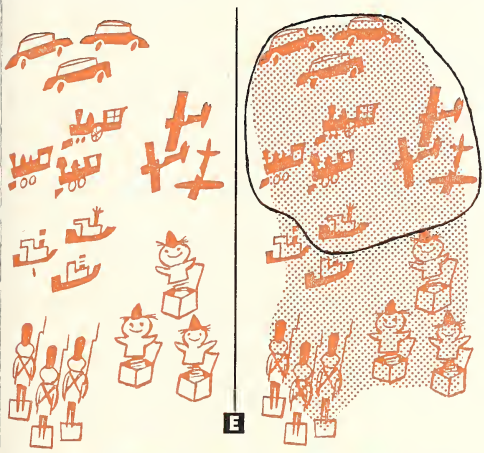
There are 9 kinds of horns in the store.
There are 2 of each kind.
There are ▒ groups of horns.
▒ horns are in each group.
There are how many horns in all?

Multiply 2 by 9. $9 \times 2 = \square$



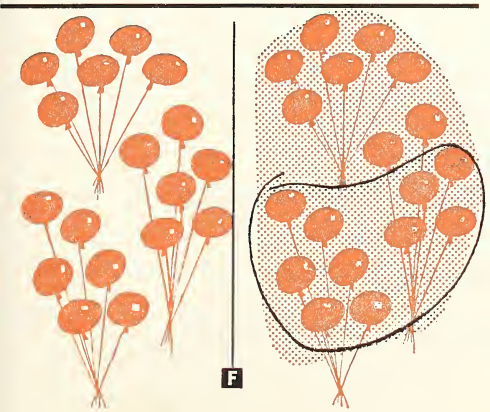
There are 2 kinds of doll plates
in the store.
There are 9 plates of each kind.
There are ▒ groups of plates.
▒ plates are in each group.
There are ▒ doll plates in all.

Multiply 9 by 2. $2 \times 9 = \square$



Bill has 6 kinds of toys.
He has 3 toys of each kind.
He has ▒ groups of toys.
There are ▒ toys in each group.
Bill has ▒ toys in all.

Multiply 3 by 6. $6 \times 3 = \square$

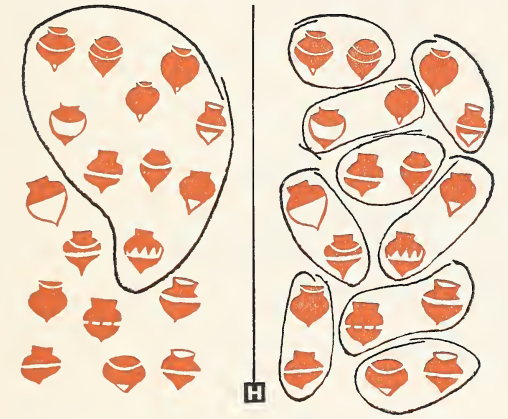


There are 3 bunches of balloons
in the store.
There are 6 balloons in each bunch.
▒ groups of balloons are in the store.
▒ balloons are in each group.
There are ▒ balloons in all.

Multiply 6 by 3. $3 \times 6 = \square$

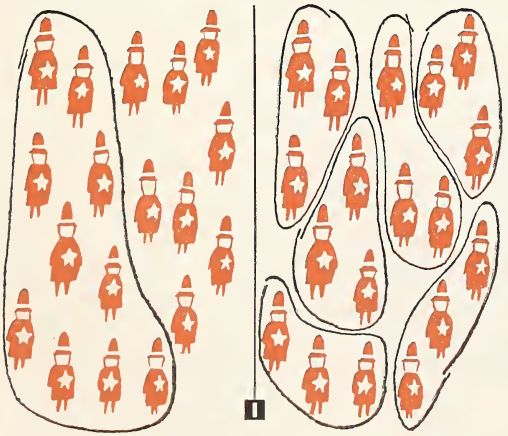
There are ▒ toy animals in the store.
The clerk is going to put them into boxes.
She will put 9 animals into each box.
She will need a box for each group
of ▒ animals.
She will need ▒ boxes.

Divide 18 by 9. $18 \div 9 = \square$



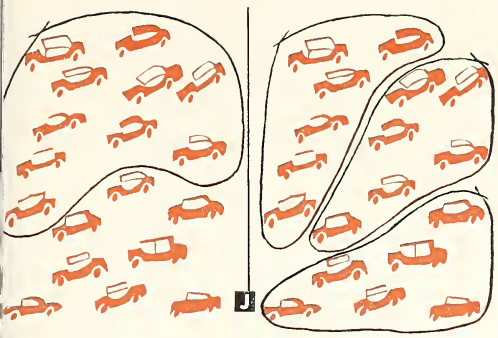
There are ▒ tops in the store.
The clerk is going to put them into boxes.
She will put 2 tops into each box.
She will need a box for each group
of ▒ tops.
She will need ▒ boxes.

Divide 18 by 2. $18 \div 2 = \square$



▒ toy policemen are in the store.
The clerk is going to put them into boxes.
She will put 3 toy policemen
into each box.
She will need a box for each group
of ▒ toy policemen.
She will need ▒ boxes.

Divide 18 by 3. $18 \div 3 = \square$



There are ▒ small cars in the store.
The clerk is going to put them into boxes.
She will put 6 cars into each box.
She will need how many boxes?

Divide 18 by 6. $18 \div 6 = ▒$

A	$9+9=▒$	E	$18-9=▒$	I	$6\times3=▒$	M	$14\div7=▒$
B	$3\times6=▒$	F	$18\div3=▒$	J	$18\div6=▒$	N	$2\times8=▒$
C	$18\div2=▒$	G	$9\times2=▒$	K	$16\div4=▒$	O	$9+7=▒$
D	$2\times9=▒$	H	$18\div9=▒$	L	$7\times2=▒$	P	$12\div3=▒$

Now you should understand how to add and multiply to make 18. You should also understand how to subtract from 18 and how to divide 18.

Using arithmetic

A At a children's zoo the boys and girls saw 5 ducks in one pond and 9 ducks in another pond. How many ducks did they see in all?

B Don saw 10 brown chickens and 8 white ones. He saw how many more brown chickens than white ones?

C Nancy had 9 cents. Mother gave her some more money. Then Nancy had 18 cents. How much money did Mother give her?

D Don had 15 cents, and Mary had 8 cents. Mary had how many fewer cents than Don?

E The children saw 16 rabbits in pens. There were 4 rabbits in each pen. How many pens were there for the rabbits?

F Tom counted 5 beehives, and Don counted 9 beehives. Don counted how many more beehives than Tom?

G Carol saw 4 squirrels, and Nancy saw 6 squirrels. How many squirrels did the two girls see in all?

H The children saw 8 horses at the zoo. Two of them were white. The others were brown. How many of these horses were brown?

I The children counted 12 sheep in a field. Three sheep were black, and the rest were white. How many sheep were white?

J Mary saw 5 white lambs and 2 black lambs in a field. She saw how many fewer black lambs than white lambs in the field?

K Dick saw 3 groups of books of animal stories on a table at the zoo. There were 6 books in each group. How many books were on the table?

L Don counted 14 birds in cages. Seven birds were in each cage. There were how many cages for the birds?

M Carol said, "I see 4 groups of little black bears. There are 3 bears in each group." How many little black bears did Carol see?

N Don said, "There are 8 pigs in one pen and 9 pigs in another pen." There were how many pigs in the two pens?

O Nancy said, "I see two groups of chickens. There are 9 chickens in each group." How many chickens did Nancy see?

P Betty gave 6 of her 15 pictures of zoo animals to Ann. How many pictures of zoo animals did Betty keep?

Thinking straight

A In 91¢, which is more, the money that the 9 stands for or the money that the 1 stands for?

B In 19¢, which is more, the money that the 9 stands for or the money that the 1 stands for?

C In 25¢, what 20 coins could the 2 stand for?

D Could the 2 in 25¢ stand for 4 nickels?

E Could the 5 in 25¢ stand for 1 nickel?

F In 55¢, what 2 coins could the 2 fives stand for?

G In 77¢, what 6 coins could the 2 sevens stand for?

H In 33¢, what 6 coins could the 2 threes stand for?

I In 12¢, the 2 stands for 2 pennies. The pennies that the 1 stands for would make ▒ groups of 2 pennies.

J In 15¢, the 5 stands for ▒ pennies. The pennies that the 1 stands for would make ▒ groups of 5 pennies.

Checking up

Test 1

A 4+9=
B 3+8=
C 8+8=
D 7+4=
E 8+9=
F 9+3=
G 7+6=
H 5+8=
I 9+9=
J 6+8=
K 2+9=
L 5+7=
M 6+6=
N 6+9=
O 9+5=
P 7+8=
Q 8+3=
R 6+7=

Test 2

A 6+5=
B 8+5=
C 9+8=
D 7+9=
E 7+7=
F 4+8=
G 9+2=
H 9+6=
I 4+7=
J 3+9=
K 5+9=
L 5+6=
M 9+4=
N 8+7=
O 8+6=
P 7+5=
Q 8+4=
R 9+7=

Test 3

A 13−4=
B 17−8=
C 11−6=
D 15−9=
E 16−8=
F 11−4=
G 14−7=
H 12−9=
I 11−3=
J 15−8=
K 12−7=
L 13−5=
M 16−9=
N 11−2=
O 14−6=
P 12−4=
Q 13−7=
R 15−6=

Test 4

A 12−5=
B 11−9=
C 14−8=
D 16−7=
E 14−5=
F 11−5=
G 18−9=
H 15−7=
I 12−3=
J 13−9=
K 11−8=
L 14−9=
M 12−6=
N 13−8=
O 12−8=
P 17−9=
Q 11−7=
R 13−6=

Test 5

A 3×5=
B 9×2=
C 2×6=
D 4×4=
E 6×3=
F 7×2=
G 2×9=
H 3×4=
I 5×3=
J 6×2=
K 2×8=
L 3×6=
M 2×7=
N 4×3=
O 8×2=

Test 6

A 18÷2=
B 14÷7=
C 16÷4=
D 12÷2=
E 15÷3=
F 18÷3=
G 14÷2=
H 12÷3=
I 16÷2=
J 12÷4=
K 18÷9=
L 12÷6=
M 16÷8=
N 18÷6=
O 15÷5=

Test 7

A 8+9=
B 6×3=
C 13−5=
D 18÷6=
E 14−8=
F 17−9=
G 4×3=
H 7+9=
I 16÷8=
J 12−7=
K 8+5=
L 15−6=
M 5×3=
N 12÷4=
O 7+8=
P 8×2=
Q 14÷7=
R 3×4=
S 11−7=
T 5+6=
U 3×5=
V 16÷2=

Test 8

A 15÷5=
B 4×4=
C 11−3=
D 8+4=
E 16−9=
F 15÷3=
G 7×2=
H 11−6=
I 8+3=
J 3×6=
K 12÷6=
L 18−9=
M 9+4=
N 16÷4=
O 9+7=
P 13−7=
Q 18÷9=
R 2×6=
S 6+7=
T 12−9=
U 9+9=
V 9+5=

End-of-block tests on all the addition, subtraction, multiplication, and division basic facts for groups 11 through 18

Exploring problems

Candy bars cost 5¢ each. Dick wants to buy 3 of them. How much will the 3 candy bars cost in all?

A

Dick will need a group of 5 pennies for each candy bar he buys.

For 3 candy bars he will need 3 groups of 5 pennies.

$3 \times 5 = \square$ ← this number.

You must find this number.

5 multiplied by 3 is 15.
The 3 candy bars will cost 15¢ in all.

There are 4 small vases on the counter. Carol wants to put 3 paper flowers into each vase. How many flowers will she need for all the vases?

B

Carol needs a group of 3 flowers for each vase.

For 4 vases she needs 4 groups of 3 flowers.

$4 \times 3 = \square$ ← this number.

You must find this number.

3 multiplied by 4 is ▒.
Carol needs ▒ flowers.

A Tom put some toy cars into 2 boxes. He put 5 cars into each box. How many toy cars in all did he put into the boxes?

Number of equal groups.
Number in each group.
Number in all.
$2 \times 5 = \square$ You must find this number.

5 multiplied by 2 = ▒
2 × 5 = ▒

B Carol had 6 small bags of cookies. 3 cookies were in each bag. How many cookies were in all the bags?

Number of equal groups.
Number in each group.
Number in all.
$6 \times 3 = \square$ You must find this number.

3 multiplied by 6 = ▒
6 × 3 = ▒

C Betty paid 6¢ apiece for 2 bags of popcorn. How much did she pay altogether for the popcorn?

THINK There are ▒ pennies in each group.
2 × 6 = ▒

D Nancy bought 3 bags of oranges. There were 6 oranges in each bag. How many oranges did she buy in all?

THINK There are ▒ oranges in each group.
3 × 6 = ▒

E Four children ate all the cookies Mother made. Each child ate 4 cookies. How many cookies did Mother make?

F Mary bought 8 pages of paper dolls. Each page had 2 dolls on it. How many paper dolls did she buy?

G Don bought 2 boxes of toy circus animals. There were 4 animals in each box. How many animals were in the 2 boxes?

H May bought 2 dollhouse chairs. She paid 8¢ for each chair. How much did she pay for the chairs?

I Jack paid 2¢ apiece for 7 candy sticks. How much did he pay in all for the candy sticks?

J Ellen took 2 bunches of flowers to school. There were 9 flowers in each bunch. How many flowers did Ellen take to school?

Sometimes when you multiply, the number of equal groups is the number of things you are going to buy, the number of boxes you will use, and so on.

Moving forward

In this lesson you will learn more about measures.

On Saturday Mother bought 4 quarts of milk. The milk she bought was equal to how many pints?

A

← Think of each quart as equal to a group of 2 pints.

← Four quarts are equal to 4 groups of 2 pints.

$4 \times 2 = \square$ ← You must find this number.

2 multiplied by 4 is 8.

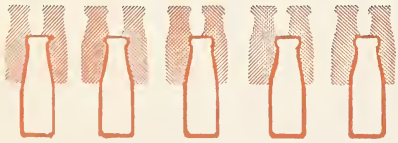
The 4 quarts of milk are equal to 8 pints.

10 pints of milk are in a store.

This milk is equal to how many quarts?

B

← A group of 2 pints is equal to 1 quart.



← Think of the 10 pints in groups of 2.

$10 \div 2 = \square$ ← You must find this number.

10 divided by 2 is ▢.

The 10 pints of milk are equal to ▢ quarts.

A 6 yards = ▢ feet

Number of equal groups.
Number in each equal group.
Number in all.

$6 \times 3 = \square$ — You must find this number.

$6 \times 3 = \square$

6 yards are equal to ▢ feet.

B 14 pints = ▢ quarts

Number in all.
Number in each equal group.
Number of equal groups.

$14 \div 2 = \square$ — You must find this number.

$14 \div 2 = \square$

14 pints are equal to ▢ quarts.

C 12 feet = ▢ yards

$12 \div 3 = \square$

D 2 gallons = ▢ pints

$2 \times 8 = \square$

E 16 quarts = ▢ gallons

F 16 pints = ▢ gallons

G 3 yards = ▢ feet

H 18 feet = ▢ yards

I 12 quarts = ▢ gallons

J 4 yards = ▢ feet

K 8 quarts = ▢ gallons

L 12 pints = ▢ quarts

M 9 feet = ▢ yards

N 3 gallons = ▢ quarts

O 5 yards = ▢ feet

P 7 quarts = ▢ pints

Q 6 feet = ▢ yards

R 2 gallons = ▢ quarts

S 4 gallons = ▢ quarts

T 18 pints = ▢ quarts

Now you should understand why 14 pints are equal to 7 quarts, why 6 yards are equal to 18 feet, and so on.

Keeping skillful

A Divide 18 by 9.
B Subtract 8 from 17.
C Add 6 to 9.
D Multiply 4 by 4.
E Multiply 6 by 3.
F Subtract 5 from 14.
G Divide 16 by 8.
H Add 7 to 9.

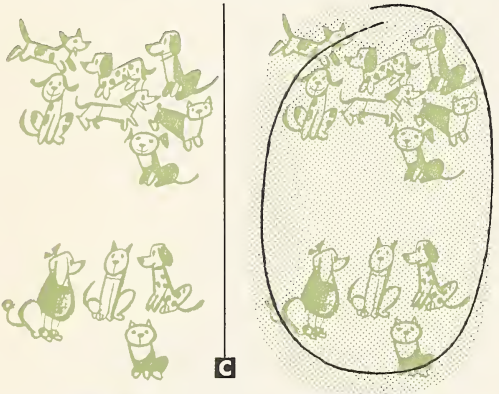
I $6 \times 3 = \square$
J $15 - 8 = \square$
K $16 \div 2 = \square$
L $9 + 9 = \square$
M $8 + 6 = \square$
N $2 \times 7 = \square$
O $16 \div 4 = \square$
P $18 - 9 = \square$

A $5 + 9 = \square$
B $2 \times 9 = \square$
C $15 \div 5 = \square$
D $17 - 9 = \square$
E $14 - 6 = \square$
F $2 \times 8 = \square$
G $9 + 8 = \square$
H $18 \div 6 = \square$

I $4 + 5 = \square$
J $11 - 6 = \square$
K $3 \times 3 = \square$
L $8 \div 4 = \square$
M $13 - 8 = \square$
N $8 + 9 = \square$
O $5 + 5 = \square$
P $12 \div 3 = \square$

Moving forward

In this lesson you will learn some new things about adding, subtracting, multiplying, and dividing.

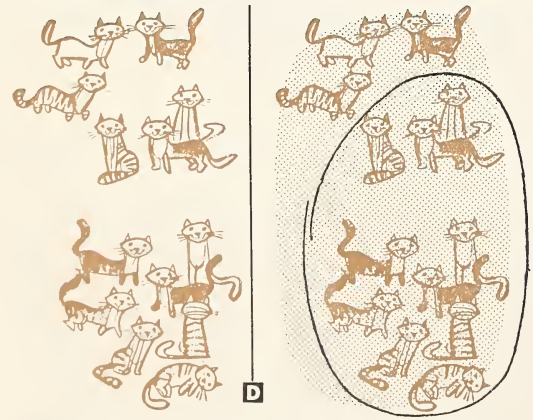


A 5 boys + 4 boys = ▒ boys
5 + 4 = ▒

B 4 boys + 5 boys = ▒ boys
4 + 5 = ▒

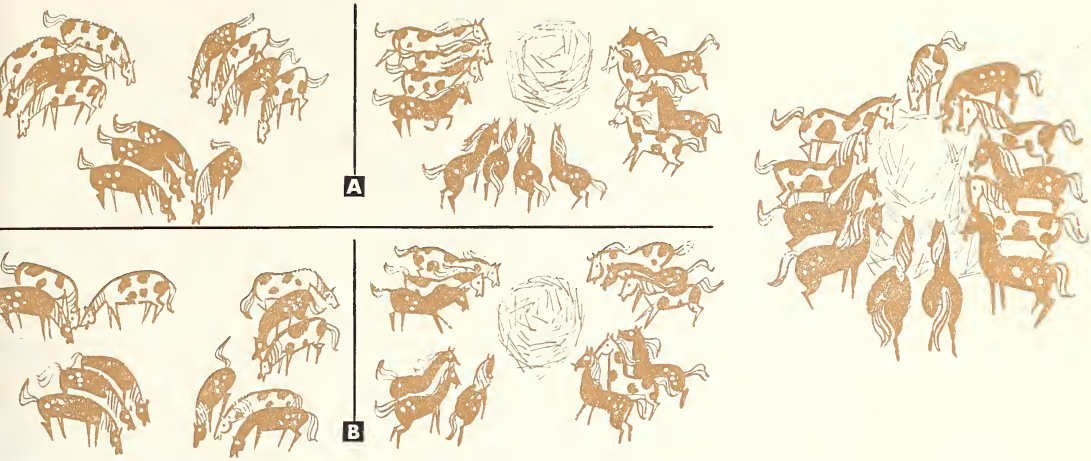
C 7 dogs + 4 dogs = ▒ dogs
7 + 4 = ▒
4 dogs + 7 dogs = ▒ dogs
4 + 7 = ▒

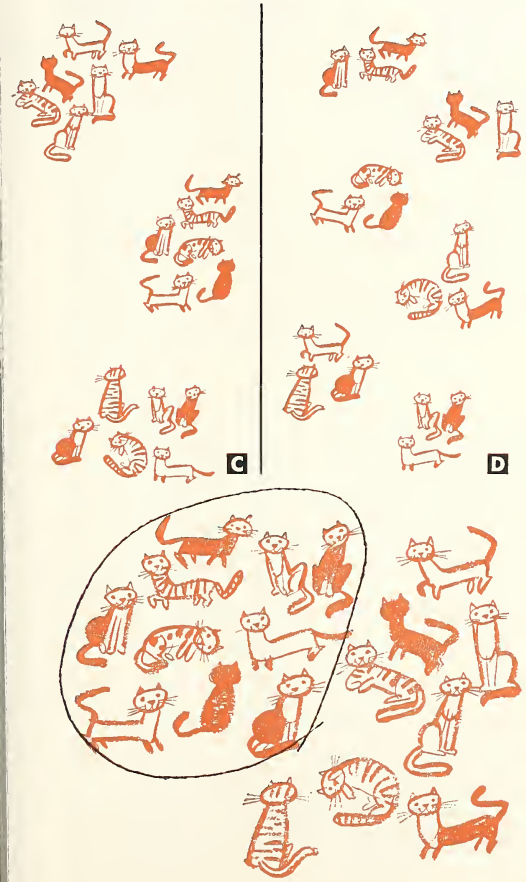
D 6 cats + 7 cats = ▒ cats
6 + 7 = ▒
7 cats + 6 cats = ▒ cats
7 + 6 = ▒



A	8 + 7 = 15	7 + 8 = 15
B	3 + 8 = 11	▒ + ▒ = 11
C	9 + 7 = 16	▒ + ▒ = 16
D	5 + 9 = 14	▒ + ▒ = 14
E	9 + 3 = ▒	▒ + ▒ = 12
F	5 + 8 = ▒	▒ + ▒ = 13
G	7 + 3 = ▒	▒ + ▒ = 10
H	9 + 8 = ▒	▒ + ▒ = 17

Order of addends and order of factors; relationship between addition and subtraction; relationship between multiplication and division





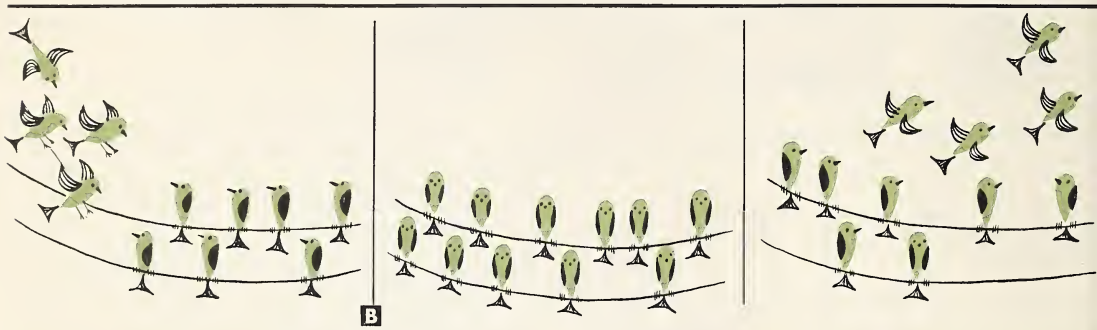
A 3 groups of 4 ponies = ▒ ponies
$3 \times 4 = \square$

B 4 groups of 3 ponies = ▒ ponies
$4 \times 3 = \square$

C 3 groups of 6 cats = ▒ cats
$3 \times 6 = \square$

D 6 groups of 3 cats = ▒ cats
$6 \times 3 = \square$

A	$3 \times 2 = \square$	$2 \times 3 = 6$
B	$3 \times 4 = \square$	$\square \times \square = 12$
C	$5 \times 3 = \square$	$\square \times \square = 15$
D	$2 \times 9 = \square$	$\square \times \square = 18$
E	$4 \times 2 = \square$	$\square \times \square = 8$
F	$2 \times 6 = \square$	$\square \times \square = 12$
G	$2 \times 5 = \square$	$\square \times \square = 10$
H	$7 \times 2 = \square$	$\square \times \square = 14$
I	$3 \times 6 = \square$	$\square \times \square = 18$
J	$8 \times 2 = \square$	$\square \times \square = 16$
K	$3 \times 5 = \square$	$\square \times \square = 15$
L	$2 \times 4 = \square$	$\square \times \square = 8$
M	$6 \times 2 = \square$	$\square \times \square = 12$



A 5 birds plus 4 birds = ▒ birds

5 + 4 = ▒

9 birds minus 4 birds = ▒ birds

9 − 4 = ▒

A	8 + 5 = ▒	13 − 5 = ▒
B	7 + 8 = ▒	15 − 8 = ▒
C	3 + 7 = ▒	10 − 7 = ▒
D	9 + 6 = ▒	15 − 6 = ▒
E	2 + 7 = ▒	9 − 7 = ▒
F	8 + 9 = ▒	▒ − ▒ = ▒
G	7 + 9 = ▒	▒ − ▒ = ▒
H	9 + 5 = ▒	▒ − ▒ = ▒
I	6 + 7 = ▒	▒ − ▒ = ▒
J	2 + 9 = ▒	▒ − ▒ = ▒
K	4 + 7 = ▒	▒ − ▒ = ▒
L	9 + 9 = ▒	▒ − ▒ = ▒

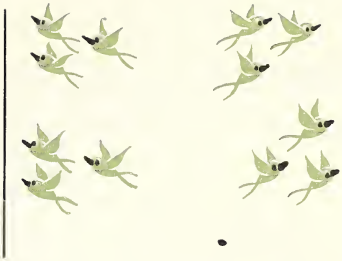
B 7 birds plus 4 birds = ▒ birds

7 + 4 = ▒

11 birds minus 4 birds = ▒ birds

11 − 4 = ▒

A	9 + 8 = ▒	▒ − ▒ = ▒
B	4 + 9 = ▒	▒ − ▒ = ▒
C	3 + 6 = ▒	▒ − ▒ = ▒
D	5 + 6 = ▒	▒ − ▒ = ▒
E	7 + 5 = ▒	▒ − ▒ = ▒
F	6 + 8 = ▒	▒ − ▒ = ▒
G	8 + 1 = ▒	▒ − ▒ = ▒
H	3 + 9 = ▒	▒ − ▒ = ▒
I	9 + 1 = ▒	▒ − ▒ = ▒
J	7 + 7 = ▒	▒ − ▒ = ▒
K	5 + 7 = ▒	▒ − ▒ = ▒
L	5 + 9 = ▒	▒ − ▒ = ▒



A

B

A 4 groups of 3 birds = ▒ birds

4 × 3 = ▒

12 birds ÷ 3 = ▒ groups of birds

12 ÷ 3 = ▒

A	2 × 7 = ▒	14 ÷ 7 = ▒
B	3 × 6 = ▒	18 ÷ 6 = ▒
C	5 × 3 = ▒	15 ÷ 3 = ▒
D	3 × 4 = ▒	▒ ÷ ▒ = ▒
E	6 × 3 = ▒	▒ ÷ ▒ = ▒
F	2 × 6 = ▒	▒ ÷ ▒ = ▒
G	4 × 2 = ▒	▒ ÷ ▒ = ▒
H	2 × 9 = ▒	▒ ÷ ▒ = ▒
I	2 × 2 = ▒	▒ ÷ ▒ = ▒
J	6 × 2 = ▒	▒ ÷ ▒ = ▒
K	2 × 8 = ▒	▒ ÷ ▒ = ▒
L	9 × 2 = ▒	▒ ÷ ▒ = ▒

B 2 groups of 5 birds = ▒ birds

2 × 5 = ▒

10 birds ÷ 5 = ▒ groups of birds

10 ÷ 5 = ▒

A	5 × 2 = ▒	▒ ÷ ▒ = ▒
B	9 × 2 = ▒	▒ ÷ ▒ = ▒
C	7 × 2 = ▒	▒ ÷ ▒ = ▒
D	3 × 5 = ▒	▒ ÷ ▒ = ▒
E	8 × 2 = ▒	▒ ÷ ▒ = ▒
F	2 × 4 = ▒	▒ ÷ ▒ = ▒
G	3 × 2 = ▒	▒ ÷ ▒ = ▒
H	6 × 2 = ▒	▒ ÷ ▒ = ▒
I	4 × 4 = ▒	▒ ÷ ▒ = ▒
J	2 × 3 = ▒	▒ ÷ ▒ = ▒
K	2 × 7 = ▒	▒ ÷ ▒ = ▒
L	5 × 3 = ▒	▒ ÷ ▒ = ▒

Now you see that when you multiply and add, you can write either number first.

Exploring problems

see

A

Tom, Ann, and Carol are going to share 12 chocolates. Each child is going to take the same number of chocolates. How many chocolates will each child get?

There are 12 chocolates in all.

12 — Number of chocolates in all

B

The children are dividing the candy into equal groups. You do not know how many chocolates will be in each group.

$12 \div \square$ — Number of chocolates in each group

C

There will be as many equal groups of chocolates as there are children. You know that there will be 3 equal groups of chocolates because there are 3 children.

$12 \div \square = 3$ — Number of equal groups

You must find this number.

D ← There are 12 chocolates in all.

← Now each child has taken 1 chocolate.

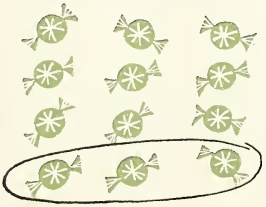
E The children have taken a group of 3 chocolates.

← Each child has taken another chocolate.

F They have taken another group of 3 chocolates.

← The children have taken another group of 3 chocolates.

G

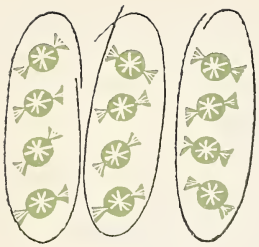


← Each time the children took 1 chocolate apiece, they took a group of 3 chocolates. So you can think of the 12 chocolates as divided into groups of 3.

H

12 divided by 3 = 4

Now turn the page.



Each child took 4 chocolates.

I

$12 \div \square = 3$

You now know that to find this number you divide 12 by 3.

J

$12 \div \square = 3$

This number is 4, because the chocolates are divided into groups of 4.

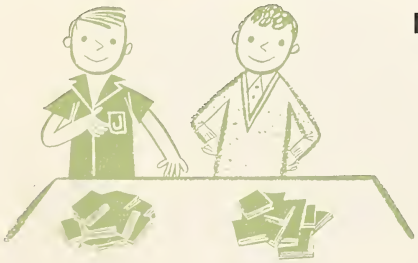
Each child will get 4 chocolates.

see

A

Jim has 18 paper tablets. He is dividing them equally with Bill. How many tablets should each boy get?

B



$18 \div \square = 2$

Number of tablets in all.

Number of tablets in each group.

Number of equal groups of tablets.

You must find this number.

compute

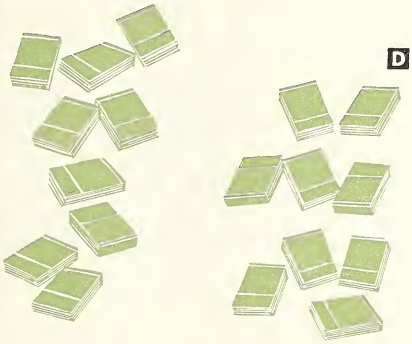
Each time the boys take 1 tablet apiece, they take a group of 2 tablets. How many groups of 2 tablets must they take to use up all the tablets?

C

$18 \div \square = 2$

To find this number, you divide 18 by what number?

D



$18 \div \square = 2$

This number is ▒, because 18 divided by 2 is ▒.

Each boy should get ▒ tablets.

A Mary made 15 dresses for 3 dolls. She made each doll the same number of dresses. How many dresses did she make for each doll?

Number in all.
Number in each group.
Number of equal groups.

$15 \div \square = 3$

You must find this number.

Divide 15 by 3.
She made ▒ dresses for each doll.

B Dick paid 16¢ for 2 pencils of the same kind. The pencils cost how many cents apiece?

THINK 16¢ = how many pennies? How many equal groups of pennies did Dick spend? Find how many pennies there were in each equal group.

$16 \div \square = 2$ Divide 16 by 2.

C Ann paid 9¢ for 3 toy animals of the same kind. How much did each toy animal cost?

$9 \div \square = 3$ Divide 9 by 3.

D Sixteen children are dividing into 4 equal teams to play a game. How many children will there be on each team?

E Ann's mother gave 6 paper dolls to Ann and Mary. She gave each girl the same number of paper dolls. How many did she give to each girl?

F Ann cut out the same number of dresses for each of 5 paper dolls. She cut out 10 dresses in all. How many dresses did she cut out for each of the paper dolls?

G Bob paid 4¢ apiece for 2 pencils. How much in all did the 2 pencils cost him?

H Four girls had a picnic. They made 12 sandwiches. If they shared them equally, how many sandwiches did each girl get?

I Betty is putting 14 small dolls in 2 big doll beds. She will put the same number of dolls in each bed. How many will she put in each bed?

J Eight boys have a bag of 16 peanut butter cookies. If they share the cookies equally, how many cookies will each boy get?

K Mother made 2 cakes for a party. She cut each cake into 8 pieces. How many pieces of cake were there?

L Some cupcakes that Ann wants cost 7¢ apiece. She has 14¢ to spend. How many cupcakes can she buy?

M Mary is sharing 10 pennies equally with her sister. How many pennies should each girl get?

N Five girls are sharing 15 drawing pencils equally. How many should each girl get?

Now you should be able to find how large the equal groups are when you know the number of things in all and the number of equal groups.

Keeping skillful

A $15 \div 5 = \square$

B $8 \div 2 = \square$

C $12 \div 4 = \square$

D $10 \div 2 = \square$

E $18 \div 3 = \square$

F $12 \div \square = 2$

G $16 \div \square = 4$

H $14 \div \square = 7$

I $6 \div \square = 3$

J $18 \div \square = 9$

K $14 \div 2 = \square$

L $9 \div \square = 3$

M $18 \div \square = 6$

N $12 \div 3 = \square$

O $8 \div \square = 4$

P $10 \div 5 = \square$

Q $16 \div 8 = \square$

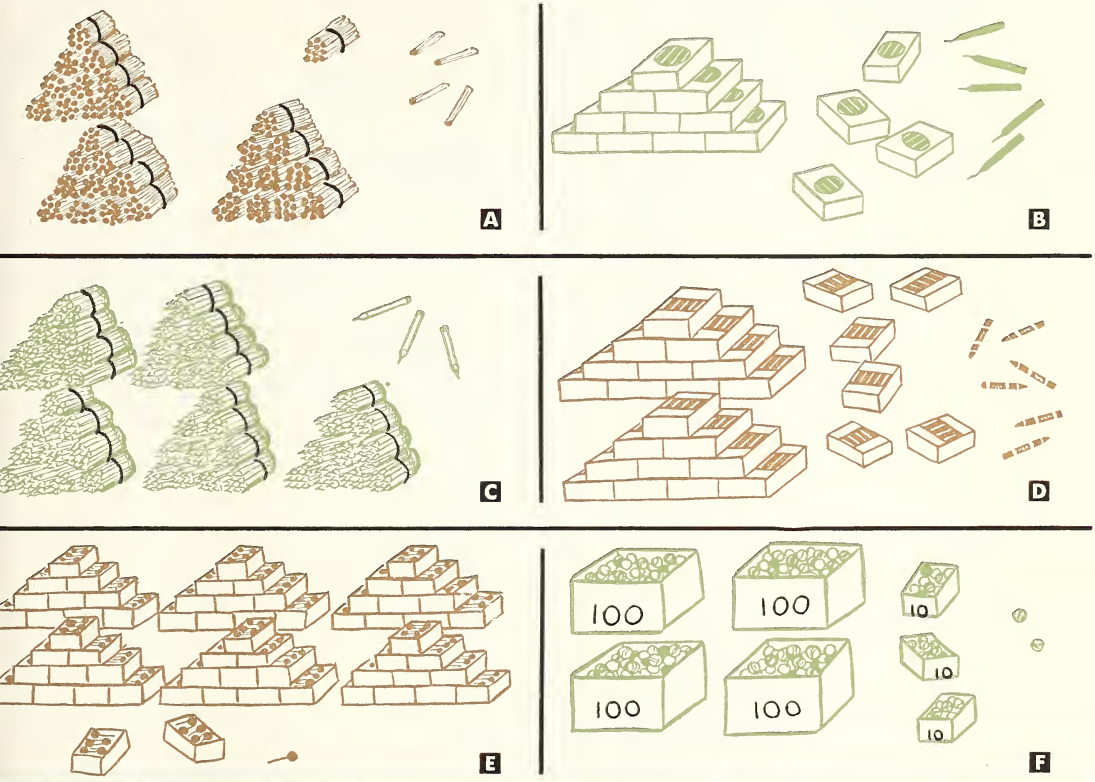
R $15 \div \square = 3$

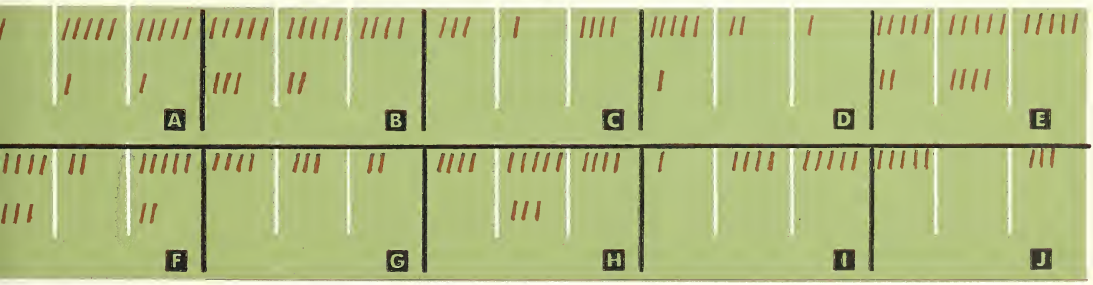
S $18 \div \square = 2$

T $12 \div \square = 6$

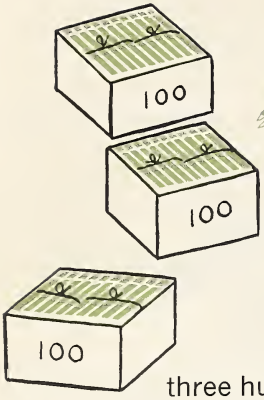
Moving forward

In this lesson you will learn how to read and write numerals with three figures in them.





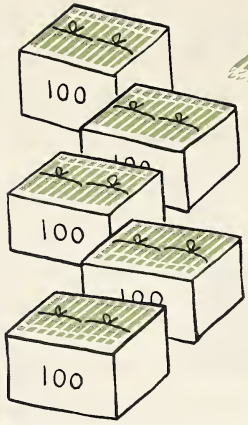
A	432	C	233	E	527	G	145	I	981
B	314	D	718	F	621	H	503	J	266



hundreds	tens	ones
3	2	5

325

three hundred twenty-five **A**



hundreds	tens	ones
5	5	0

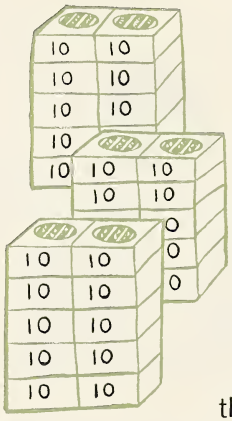
550

five hundred fifty **B**

hundreds	tens	ones
1	1	7

117

one hundred seventeen **C**


10
10
10

A one hundred ten
B nine hundred sixty
C four hundred twenty
D seven hundred seventy
E three hundred fifty
F five hundred thirty
G two hundred forty
H six hundred eighty
I eight hundred ninety
J five hundred ten
K two hundred eighty
L nine hundred twenty
M six hundred fifty
N three hundred thirty
O one hundred forty

Write

A five hundred one
B two hundred sixty-four
C nine hundred thirty
D six hundred ninety-three
E one hundred two
F eight hundred twenty-seven
G three hundred seven
H four hundred twelve
I seven hundred eighty-six

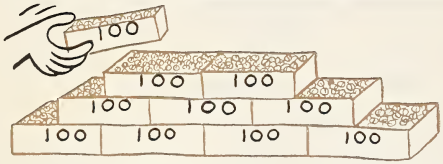
Read

A	410	E	380	I	614
B	762	F	526	J	384
C	809	G	901	K	790
D	273	H	150	L	537

Now you should be able to read and write numerals with three figures in them.

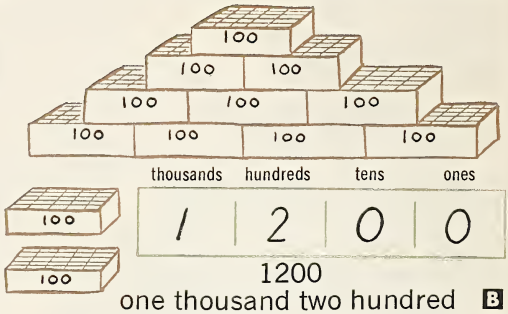
Moving forward

In this lesson you will learn to read and write numerals with four figures in them.



thousands	hundreds	tens	ones
1	0	0	0

1000
one thousand **A**

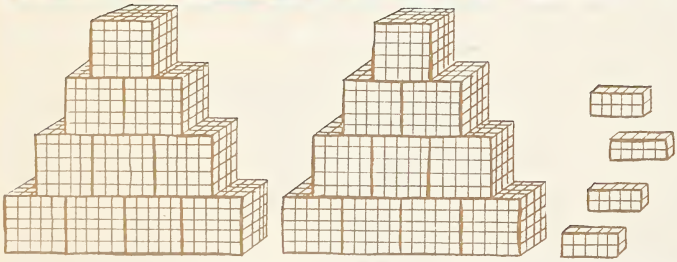


thousands	hundreds	tens	ones
1	2	0	0

1200
one thousand two hundred **B**

thousands	hundreds	tens	ones
3	1	1	6

3116
three thousand
one hundred sixteen **C**

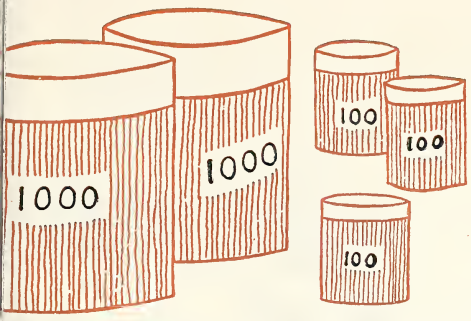


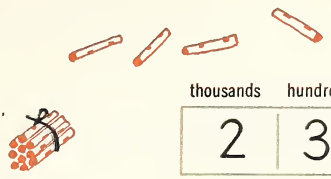
thousands	hundreds	tens	ones
2	0	4	0

2040
two thousand forty **D**

thousands	hundreds	tens	ones
1	3	2	5

1325
one thousand three
hundred twenty-five **E**





thousands	hundreds	tens	ones
2	3	1	4

2314

A 4 is in ones' place.
B 1 is in tens' place.
C 3 is in hundreds' place.
D 2 is in thousands' place.

A In 3064, ▤ is in hundreds' place.
B In 1827, ▤ is in ones' place.
C In 9365, ▤ is in thousands' place.
D In 7918, ▤ is in tens' place.
E In 642, ▤ is in tens' place.
F In 1497, ▤ is in thousands' place.
G In 2044, ▤ is in hundreds' place.
H In 3428, ▤ is in ones' place.
I In 821, ▤ is in tens' place.
J In 9360, ▤ is in thousands' place.
K In 6345, ▤ is in hundreds' place.

Read

A 1723	G 7655	M 8304
B 6485	H 4036	N 3784
C 9401	I 3759	O 7021
D 4839	J 8812	P 3002
E 5573	K 6340	Q 9090
F 2480	L 2947	R 7800

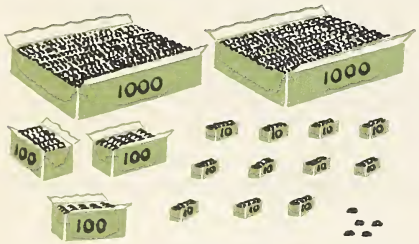
Write

A six hundred ten
B three thousand one hundred forty-two
C seven thousand fifty
D one hundred sixty-eight
E eight thousand nine
F five thousand nine hundred eighty-five
G four hundred three
H two thousand nine
I nine thousand two hundred thirty-one
J six thousand eight hundred
K one thousand three hundred sixty
L four thousand four hundred fifty-five
M nine thousand two

Now you should be able to read and write numerals that have four figures in them.

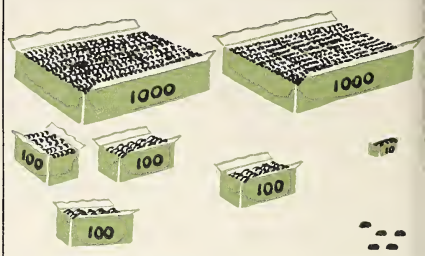
Moving forward

This lesson will show you some different ways in which you can think about numbers.



thousands	hundreds	tens	ones
2	3	11	5

A



thousands	hundreds	tens	ones
2	4	1	5

2415

thousands	hundreds	tens	ones
1	12	3	7

B

thousands	hundreds	tens	ones
2	2	3	7

2237

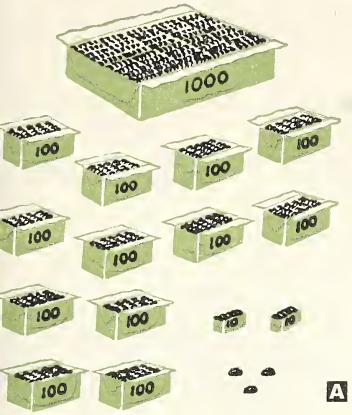
hundreds	tens	ones
4	9	14

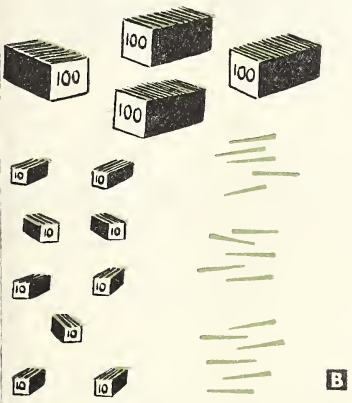
hundreds	tens	ones
4	10	4

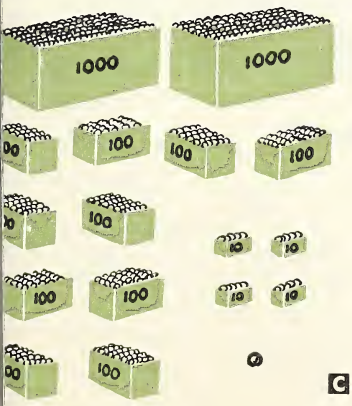
C

hundreds	tens	ones
5	0	4

504





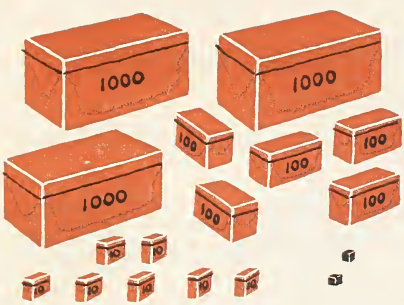


A ▒ thousand ▒ hundreds ▒ tens ▒ ones = ▒
B ▒ hundreds ▒ tens ▒ ones = ▒
C ▒ thousands ▒ hundreds ▒ tens ▒ one = ▒

A 7 hundreds 14 tens 3 ones can be 8 hundreds ▒ tens ▒ ones. The number is ▒.

B 2 thousands 5 hundreds 6 tens 14 ones can be 2 thousands ▒ hundreds 7 tens ▒ ones. The number is ▒.

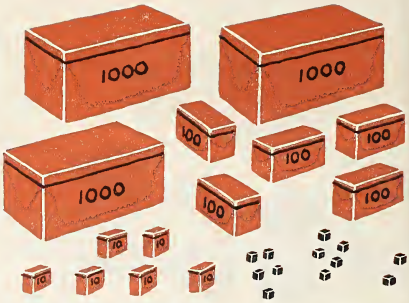
C 3 thousands 15 hundreds 38 tens 6 ones = ▒
D 4 thousands 6 hundreds 14 tens 2 ones = ▒
E 8 hundreds 17 tens 21 ones = ▒
F 5 thousands 12 hundreds 0 tens 11 ones = ▒
G 3 thousands 2 hundreds 13 tens 5 ones = ▒
H 6 hundreds 34 tens 0 ones = ▒
I 6 thousands 29 hundreds 17 tens 19 ones = ▒
J 8 hundreds 35 tens 18 ones = ▒
K 7 thousands 9 hundreds 11 tens 14 ones = ▒
L 1 thousand 14 hundreds 22 tens 5 ones = ▒
M 3 hundreds 19 tens 24 ones = ▒
N 2 thousands 5 hundreds 12 tens 23 ones = ▒
O 2 hundreds 31 tens 17 ones = ▒
P 8 thousands 2 hundreds 1 ten 30 ones = ▒
Q 3 thousands 0 hundreds 15 tens 2 ones = ▒
R 5 hundreds 19 tens 38 ones = ▒
S 1 thousand 35 hundreds 0 tens 4 ones = ▒
T 9 thousands 5 hundreds 12 tens 34 ones = ▒
U 3 thousands 21 hundreds 29 tens 31 ones = ▒
V 6 hundreds 47 tens 32 ones = ▒
W 7 thousands 7 hundreds 29 tens 19 ones = ▒
X 9 hundreds 25 tens 6 ones = ▒
Y 9 hundreds 16 tens 25 ones = ▒
Z 5 thousands 38 hundreds 13 tens 39 ones = ▒



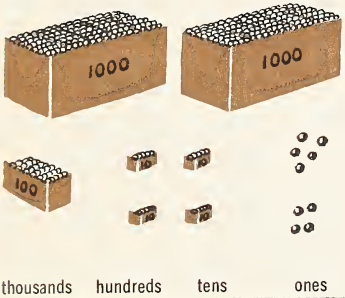
thousands	hundreds	tens	ones
3	5	7	2

3572

A



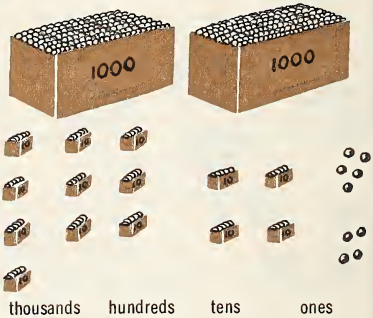
thousands	hundreds	tens	ones
3	5	6	12



thousands	hundreds	tens	ones
2	1	4	9

2149

B

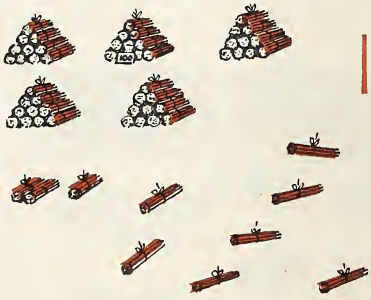


thousands	hundreds	tens	ones
2	0	14	9

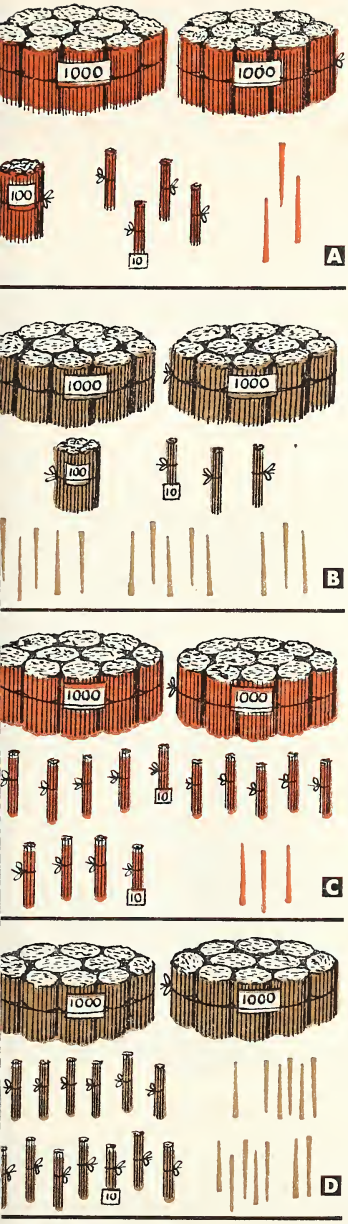
hundreds	tens	ones
6	0	1

601

C



hundreds	tens	ones
5	10	1



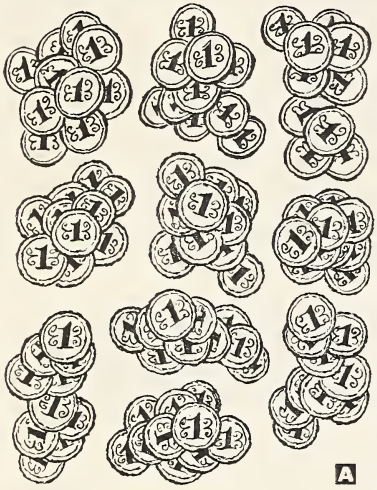
A 2143 = ▒ thousands ▒ hundred ▒ tens ▒ ones
B 2143 = ▒ thousands ▒ hundred ▒ tens ▒ ones
C 2143 = ▒ thousands ▒ hundreds ▒ tens ▒ ones
D 2143 = ▒ thousands ▒ hundreds ▒ tens ▒ ones

A 8245 = 7 thousands ▒ hundreds 4 tens 5 ones
B 607 = 5 hundreds ▒ tens 7 ones
C 1392 = 1 thousand 3 hundreds ▒ tens 12 ones
D 4781 = ▒ thousands 17 hundreds 8 tens 1 one
E 1042 = 1 thousand 0 hundreds 3 tens ▒ ones
F 973 = 8 hundreds ▒ tens 3 ones
G 5204 = 5 thousands 1 hundred ▒ tens 4 ones
H 2589 = 1 thousand ▒ hundreds 8 tens 9 ones
I 7621 = 7 thousands 6 hundreds 1 ten ▒ ones
J 264 = 1 hundred ▒ tens 4 ones
K 3017 = 2 thousands ▒ hundreds 1 ten 7 ones
L 9249 = 8 thousands ▒ hundreds 3 tens 19 ones
M 8760 = 8 thousands 6 hundreds ▒ tens 0 ones
N 200 = 1 hundred ▒ tens 0 ones
O 3487 = 3 thousands 3 hundreds ▒ tens 7 ones
P 5472 = 4 thousands ▒ hundreds 6 tens ▒ ones
Q 486 = 4 hundreds 7 tens ▒ ones
R 6238 = 5 thousands ▒ hundreds 2 tens ▒ ones
S 1000 = 9 hundreds ▒ tens 0 ones
T 8145 = 7 thousands ▒ hundreds 3 tens ▒ ones
U 524 = 4 hundreds ▒ tens 4 ones
V 7842 = 6 thousands ▒ hundreds 3 tens ▒ ones
W 4862 = 3 thousands ▒ hundreds 5 tens ▒ ones
X 930 = 9 hundreds 2 tens ▒ ones
Y 2413 = 2 thousands ▒ hundreds 0 tens ▒ ones
Z 3416 = 2 thousands ▒ hundreds 0 tens ▒ ones

Now you should understand more about numerals and what they mean.

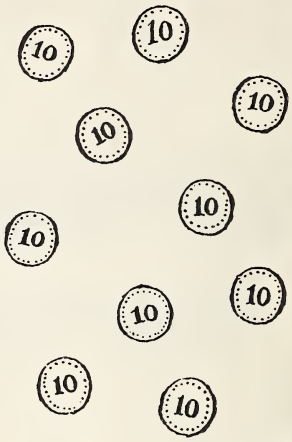
Moving forward

Now you will learn about the dollar. You will also learn more about counting and writing amounts of money.

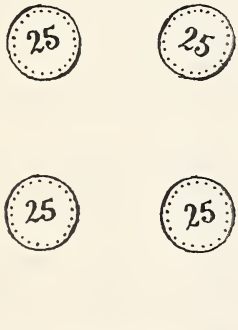


A

B



C



D

E

$1 100 cents

one dollar F

$2

$5

$10

$20 G

1 dollar 25 35 36
1 dollar and 36 cents

H

5 dollars 50 75 80
5 dollars and 80 cents

I

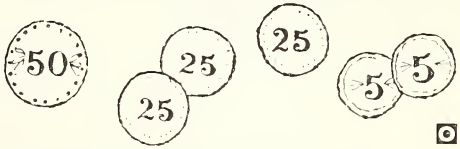
J

K

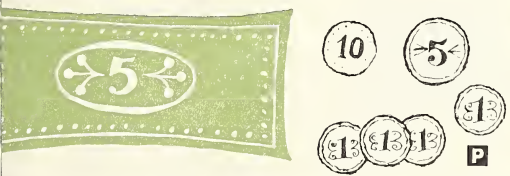
L

M

N



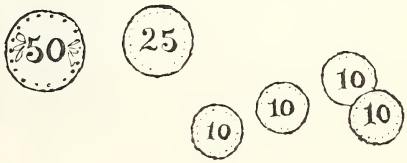
O



P

Q

R



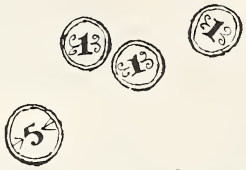
S

1 dollar and 10 cents
$1.10 A

1 dollar and 50 cents
$1.50 B

2 dollars and 5 cents
$2.05 C

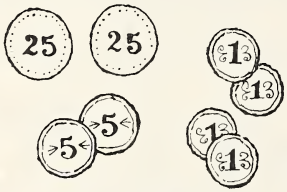
85 cents
85¢
$.85 D



8 cents
8¢
$.08 E

3 dollars
$3
$3.00 F

G

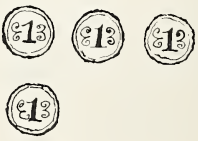


H

I

J

K



L

M

N

O

Read

A $7.46
B $.59
C $.70
D 31¢
E $12.00
F $.05
G $20.50
H $.17
I $4.00
J $40.00
K $.40
L $6.08
M $33
N $.76
O $76
P $9.07
Q $25.95
R $18.30
S $.03
T $3.00
U $30
V $8.93
W $1.08
X $10.80
Y $14.75
Z $22.67

Write with numerals and signs.

A four dollars and thirty cents
B fifty-five cents
C ten dollars
D one dollar and eleven cents
E thirteen dollars and sixty-eight cents
F four dollars and three cents
G seven cents
H seven dollars
I ninety-two cents
J twenty cents
K twenty dollars
L twenty dollars and one cent
M twenty dollars and ten cents

A 1 dollar = ▭ dimes
B 1 dollar = ▭ quarters
C 1 half dollar = ▭ dimes
D 1 quarter = ▭ nickels
E 1 dollar = ▭ cents
F 1 dime = ▭ nickels
G 1 quarter = ▭ cents
H 1 dollar = ▭ nickels
I 1 nickel = ▭ cents
J 1 half dollar = ▭ quarters
K 1 dollar = ▭ half dollars
L 1 dime = ▭ cents
M 1 half dollar = ▭ nickels
N 1 half dollar = ▭ cents

A 1 dime = 1 nickel ▭ pennies
B 1 quarter = 3 nickels ▭ pennies
C 1 half dollar = 1 quarter ▭ nickels
D 1 dollar = 2 quarters ▭ dimes
E 1 quarter = 1 dime ▭ nickels
F 1 dollar = 1 half dollar ▭ quarters
G 1 quarter = ▭ nickels 5 pennies
H 1 dollar = 5 dimes ▭ nickels
I 1 dollar = 3 quarters ▭ pennies
J 1 half dollar = 5 nickels ▭ pennies
K 1 dollar = 2 quarters ▭ nickels
L 1 half dollar = ▭ dimes 4 nickels
M 1 quarter = ▭ nickels 15 pennies
N 1 dollar = ▭ quarters 5 nickels

Now you should be able to count and write dollars and cents.

Checking up

Test 1

Write with numerals.

A five hundred forty-six
B seven hundred
C four hundred twenty
D six hundred eight
E nine hundred one
F three thousand one hundred fifty-nine
G eight thousand seven hundred thirty
H six thousand five hundred
I one thousand eighty-six
J four thousand two hundred seven

Test 2

Write with numerals and signs.

A thirteen dollars and seventy-five cents
B six dollars and ninety cents
C fifteen dollars
D forty-eight cents
E five dollars and nine cents
F one dollar
G one cent
H sixty cents
I eighty-two cents
J five cents

Test 3

A 1 half dollar = ▒ cents
B 1 dollar = ▒ dimes
C 1 dime = ▒ nickels
D 1 quarter = ▒ cents
E 1 dollar = ▒ half dollars
F 1 half dollar = ▒ quarters
G 1 half dollar = ▒ nickels
H 1 dollar = ▒ cents
I 1 quarter = ▒ nickels
J 1 dime = ▒ cents
K 1 dollar = ▒ quarters
L 1 dollar = ▒ nickels

Keeping skillful

A $3+▒=12$
B $9+▒=18$
C $5+▒=13$
D $7+▒=15$
E $9+▒=16$
F $4+▒=10$
G $3\times6=▒$
H $7+5=▒$
I $8+8=▒$
J $6+5=▒$
K $2\times9=▒$
L $4\times4=▒$
M $16\div8=▒$
N $12\div2=▒$
O $15\div5=▒$
P $18\div2=▒$
Q $14\div7=▒$
R $9\div3=▒$
S $14\div▒=7$
T $18\div▒=3$
U $16\div▒=4$
V $12\div▒=6$
W $18\div▒=2$
X $15\div▒=3$

Learning how

This lesson will show you how to add a number with one figure to a number with two figures.

see

A

Dick had 16 acorns. Jack gave him 9 more acorns. Then Dick had how many acorns?

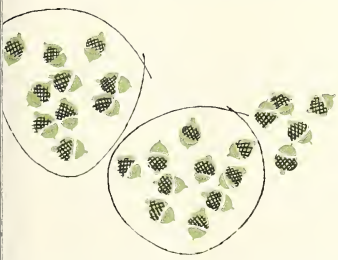
$16+9=\square$

You must find this number.

B

Think of the 9 acorns as being put with the 16 acorns.

You will add 9 to 16.



C

Now you have another group of 10 acorns and 5 acorns.

When you add 9 to 16, you have another ten and 5 ones.

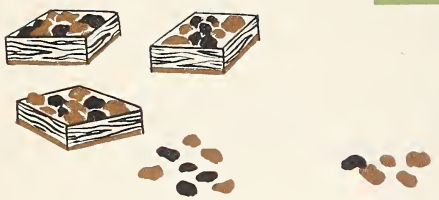
D

There are 2 groups of 10 acorns and 5 acorns.

$16+9=2$ tens 5 ones $\qquad 16+9=25$

Dick had 25 acorns.

think



A

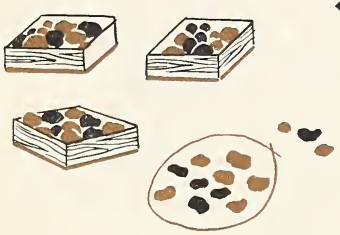
Ann found 38 stones on the playground. Mary found 5 stones. How many stones did the two girls find?

$38+5=\square$ ← You must find this number.

B

← What must you think of doing with the 5 stones?

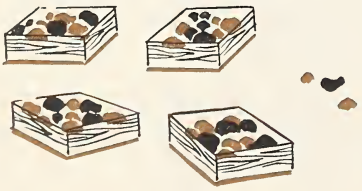
What do you add to 38?



C

← Have you made another group of 10 stones?

When you add 5 to 38, will you have another ten?



D

← There are ▢ groups of 10 stones and ▢ stones.

$38+5=$ ▢ tens ▢ ones

$38+5=\square$

The girls found ▢ stones in all.

try

A Nancy had 24 jacks. Ellen had 7 jacks. How many jacks did the girls have in all?
24 + 7 = 3 tens 1 one
24 + 7 = 31

B Tom had 15 marbles. Bill had 3 marbles. How many marbles did the boys have in all?
15 + 3 = 1 ten 8 ones
15 + 3 = 18

C 73 + 8 = 8 tens 1 one
73 + 8 = 81

D 89 + 3 = 9 tens 2 ones
89 + 3 = 92

E 55 + 8 = 6 tens 3 ones
55 + 8 = 63

F 21 + 9 = 3 tens
21 + 9 = 30

G 40 + 5 = 4 tens 5 ones
40 + 5 = 45

do

A Tom had 27 acorns. Jack gave him 9 more acorns. Then Tom had how many acorns?
27 + 9 = ▒

B Ellen found 36 little stones on the school playground. Carol found 6 little stones. How many stones did the girls find altogether?
36 + 6 = ▒

C 89 + 6 = ▒
D 25 + 6 = ▒
E 14 + 3 = ▒
F 50 + 4 = ▒
G 33 + 7 = ▒
H 11 + 4 = ▒
I 10 + 8 = ▒
J 37 + 9 = ▒
K 29 + 4 = ▒
L 32 + 8 = ▒
M 57 + 3 = ▒

N 26 + 3 = ▒
O 12 + 8 = ▒
P 48 + 1 = ▒
Q 23 + 9 = ▒
R 79 + 4 = ▒
S 28 + 9 = ▒
T 18 + 7 = ▒
U 39 + 1 = ▒
V 40 + 6 = ▒
W 19 + 8 = ▒
X 24 + 5 = ▒

A 15 + 7 = ▒
B 16 + 9 = ▒
C 32 + 4 = ▒
D 62 + 5 = ▒
E 26 + 3 = ▒
F 67 + 7 = ▒
G 19 + 4 = ▒
H 36 + 5 = ▒
I 20 + 7 = ▒
J 96 + 2 = ▒
K 88 + 9 = ▒

L 24 + 7 = ▒
M 38 + 6 = ▒
N 45 + 5 = ▒
O 96 + 2 = ▒
P 13 + 5 = ▒
Q 27 + 7 = ▒
R 10 + 9 = ▒
S 34 + 3 = ▒
T 24 + 7 = ▒
U 42 + 8 = ▒
V 17 + 6 = ▒

Now you can add a number with one figure to a number with two figures.

Learning how

In this lesson you will learn to add three or four numbers with one figure in them.

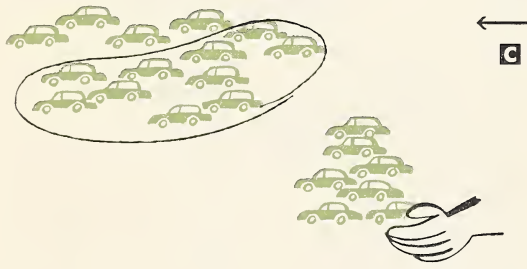
see

Tom had 6 toy cars. Don had 8 toy cars. Jack had 7 toy cars. The boys had how many toy cars in all?

$6+8+7=\square$ You must find this number.

First put 8 toy cars with 6 toy cars.

6
8 ← Add 8 to 6. Remember the 14.
7



Now put 7 toy cars with 14 toy cars.

6
8
7 ← Next add 7 to the 14 you remember.

The boys had 21 toy cars in all.

6
8
7
21 ← Now you have 21. Write 21 here. 21 is the sum.

$6+8+7=21$

think

A Carol had 5 little dolls. Betty had 3 dolls, Mary had 7 dolls, and Ellen had 9 dolls. The girls had how many dolls in all?

$5+3+7+9=\square$ ← You must find this number.

B Which group of dolls do you put with the group of 5 dolls?

5
3 ← What number do you add to the 5? What number do you remember?
7
9

C How many dolls do you put with 8 dolls?

5
3
7 ← Now add ▒ to 8. What number do you remember?
9

D How many dolls do you put with 15 dolls?

5
3
7
9 ← What do you add to 15?

Now turn the page.

E

$$\begin{array}{r} 5 \\ 3 \\ 7 \\ 9 \\ \hline \square \end{array}$$

What number do you write here?

← What is the sum?

← The girls had ▢ dolls in all.

$5+3+7+9=\square$

---

try

A Jack had 9 marbles, Dick had 6 marbles, and Bill had 8 marbles. The boys had how many marbles in all?

$9+6+8=\square$

$$\begin{array}{r} 9 \\ 6 \\ 8 \\ \hline 23 \end{array}$$

B Dick took 7 sandwiches to a picnic, his father took 7, and his mother took 6. How many sandwiches in all did they take to the picnic?

$7+7+6=\square$

$$\begin{array}{r} 7 \\ 7 \\ 6 \\ \hline 20 \end{array}$$

C $5+4+8+6=\square$

$$\begin{array}{r} 5 \\ 4 \\ 8 \\ 6 \\ \hline 23 \end{array}$$

D $7+8+9=\square$

$$\begin{array}{r} 7 \\ 8 \\ 9 \\ \hline 24 \end{array}$$

---

do

A Mary had 5 toy chairs. She bought 6 more, and her sister gave her 4. Then Mary had how many toy chairs?

$5+6+4=\square$

B Bill had 9 small boats. He bought 4 more, and his father gave him 2 for his birthday. Then Bill had how many small boats?

$9+4+2=\square$

C Nancy bought 4 balloons, Jack bought 8 balloons, Dick bought 6, and Carol bought 3. How many balloons did the children buy?
$4+8+6+3=$ ▒

D Carol bought 7 jacks, and Nancy bought 5. Ellen bought 6 jacks, and Betty bought 8. How many jacks did the girls buy?
$7+5+6+8=$ ▒

E On Saturday Bob read 3 stories in his new book. He read 6 more stories on Monday and 8 more stories on Tuesday. He read how many stories in his new book?
$3+6+8=$ ▒

F Bill had 7¢. He earned 8¢ yesterday and 9¢ today. Now he has how much money?
$7+8+9=$ ▒

G $5+4+6+3=$ ▒
H $8+7+9=$ ▒
I $9+5+6+4=$ ▒
J $7+8+3=$ ▒
K $4+9+5+2=$ ▒
L $6+4+8=$ ▒

M $4+8+7+6=$ ▒
N $7+9+3+5=$ ▒
O $9+4+8=$ ▒
P $8+5+7+2=$ ▒
Q $6+8+9+9=$ ▒
R $4+7+6=$ ▒

A $3+1+8+4=$ ▒
B $7+5+2+9=$ ▒
C $5+4+8=$ ▒
D $1+9+3+6=$ ▒
E $6+5+4+7=$ ▒
F $8+4+9=$ ▒

Now you should understand how to add two or more numbers with one figure in them.

Keeping skillful

Find the sum.

A 3, 8, 7
B 9, 4, 2, 6
C 7, 7, 6, 3
D 8, 7, 6, 5
E 5, 9, 8, 7
F 6, 9, 8
G 4, 8, 3, 5
H 5, 6, 9
I 8, 7, 8
J 5, 3, 7, 9
K 8, 6, 2
L 3, 9, 8
M 7, 9, 5, 9
N 6, 8, 8
O 4, 9, 7, 9
P 5, 7, 8, 5
Q 7, 7, 5, 5
R 9, 2, 4

A $24+7=$ ▒
B $18+3=$ ▒
C $85+5=$ ▒
D $40+2=$ ▒
E $77+6=$ ▒
F $94+5=$ ▒
G $38+4=$ ▒
H $10+8=$ ▒
I $11+9=$ ▒
J $52+7=$ ▒
K $69+5=$ ▒
L $12+6=$ ▒
M $35+9=$ ▒
N $82+7=$ ▒
O $49+6=$ ▒
P $14+7=$ ▒
Q $56+8=$ ▒
R $91+3=$ ▒
S $15+6=$ ▒
T $28+5=$ ▒

Learning how

In this lesson you will learn how to add numbers with two figures in them.

Ann bought 28 candy bars for her party. Betty bought 19 candy bars for Ann's party. How many candy bars did the girls buy for the party?

$28+19=\square$ ← You must find this number.

← Put 9 candy bars with 8 candy bars.

$$\begin{array}{r} 28 \\ 19 \\ \hline \end{array}$$

↙ Add the ones. There are 17 ones.

← Put 10 of the 17 candy bars in a box. You have 7 candy bars left over.

$$\begin{array}{r} 28 \\ 19 \\ \hline 7 \end{array}$$

17 is 1 ten 7 ones.

Write 7 here to show that there are 7 ones in the answer.

← Put the new box of 10 with the other boxes of 10.

$$\begin{array}{r} {\scriptstyle 1} \\ 28 \\ 19 \\ \hline 7 \end{array}$$

Write 1 in tens' place to show that there is 1 more ten.

Put the boxes of 10 together.

E

Add the tens.

$$\begin{array}{r} {\scriptstyle 1} \\ 28 \\ +\ 19 \\ \hline 47 \end{array}$$

There are 4 tens.

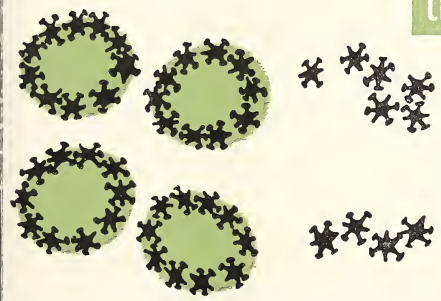
Write 4 here to show that there are 4 tens in the answer.

F

The girls bought 47 candy bars in all.

$28 + 19 = 47$

think

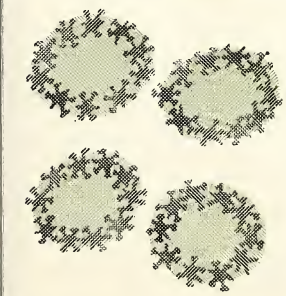


A

Ellen had 26 jacks, and Betty had 24 jacks. The two girls had how many jacks altogether?

$26 + 24 = \square$

You must find this number.



B

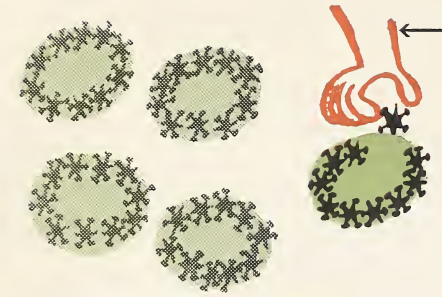
What do you put together first?

$$\begin{array}{r} 26 \\ +\ 24 \\ \hline \end{array}$$

What do you add first?

How many ones are there?

Now turn the page.



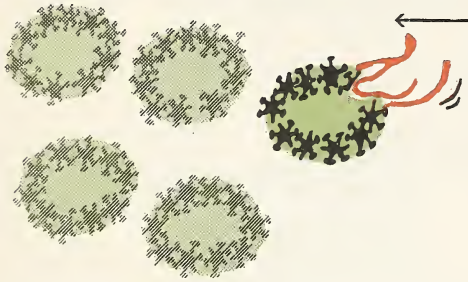
What do you do with the 10 jacks?

C Are any jacks left over?

```
 26
 24
----
  0
```

Why do you write 0 here?

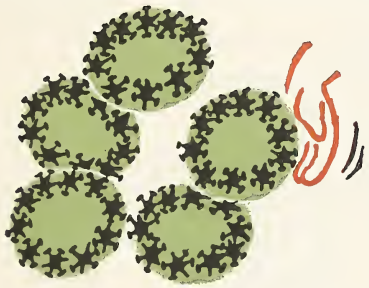
What do you do with the new card of 10 jacks?



D

```
 1
 26
 24
----
  0
```

Why is 1 put here?



What do you put together now?

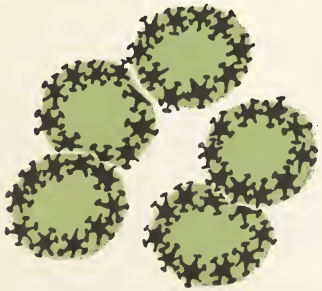
E

```
 1
 26
 24
----
 50
```

What do you add now?

How many tens are there?

What does the 5 show?



F

The girls had ▒ jacks.

$26 + 24 = ▒$

try

A Betty bought 3 boxes of cookies for a party. There were 38 cookies in one box, 30 cookies in another box, and 24 cookies in the third box. How many cookies did Betty buy?
38 + 30 + 24 = ▒

```
 1  ← Either remember this ten or write it.
38
30
24
--
92
```

B 41 + 70 + 58 = ▒

```
 41
 70
 58
---
169
```

Here the sum of the tens is 16. 16 tens equal 1 hundred and 6 tens. So the answer has three figures.

C 63 + 34 = ▒

```
 63
 34
---
 97
```

D 54 + 8 + 63 = ▒

```
 54
  8
 63
---
125
```

do

A Ellen had 57 pennies. Her father gave her 25 more pennies. How many pennies did Ellen have then?
57 + 25 = ▒

B Mary has 20 paper dolls. Carol has 38 paper dolls. The two girls have how many paper dolls in all?
20 + 38 = ▒

C 17 + 76 = ▒
D 69 + 45 = ▒
E 14 + 81 = ▒
F 76 + 53 = ▒
G 48 + 9 = ▒
H 74 + 26 + 41 = ▒
I 3 + 18 + 37 = ▒
J 89 + 32 + 40 = ▒
K 57 + 28 + 25 = ▒
L 50 + 48 + 15 = ▒

M 86 + 34 + 47 = ▒
N 36 + 55 = ▒
O 50 + 26 + 24 = ▒
P 18 + 42 = ▒
Q 59 + 44 + 61 = ▒
R 35 + 82 + 27 = ▒
S 47 + 46 = ▒
T 35 + 25 = ▒
U 60 + 39 = ▒
V 21 + 95 + 36 = ▒

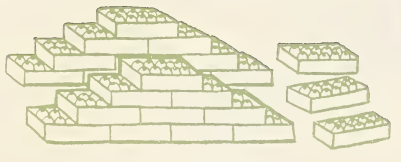
A 40 + 34 = ▒
B 19 + 18 + 22 = ▒
C 52 + 27 + 88 = ▒
D 97 + 38 = ▒
E 30 + 24 + 24 = ▒
F 59 + 61 + 43 = ▒
G 28 + 9 + 36 = ▒
H 82 + 47 + 58 = ▒
I 73 + 75 = ▒
J 29 + 6 + 14 = ▒

Now you should be able to add any numbers with two figures in them.

Learning how

In this lesson you will learn how to add numbers with three figures in them.

see



A

There were 235 candle holders on one counter and 189 candle holders on another counter. How many candle holders were there on the two counters?

$235+189=\square$

You must find this number.

B

Put 9 candle holders with 5 candle holders.

Add the ones.
There are 14 ones.

$$\begin{array}{r} 235 \\ +\ 189 \\ \hline \end{array}$$

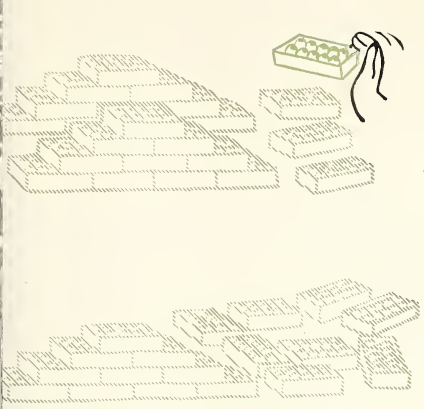
C

Put 10 of the 14 candle holders into a box. There are 4 candle holders left over.

$$\begin{array}{r} 235 \\ +\ 189 \\ \hline 4 \end{array}$$

14 is 1 ten 4 ones.

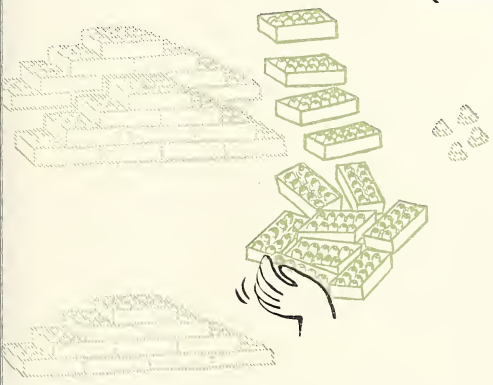
Write 4 here to show there are 4 ones in the answer.



D Put the new box of 10 candle holders with the other boxes of 10.

$$\begin{array}{r} {\scriptstyle 1} \\ 235 \\ 189 \\ \hline 4 \end{array}$$

Write 1 in tens' place to show there is 1 more ten.



E Now put the boxes of 10 together.

$$\begin{array}{r} {\scriptstyle 1} \\ 235 \\ 189 \\ \hline 4 \end{array}$$

Add the tens. There are 12 tens.

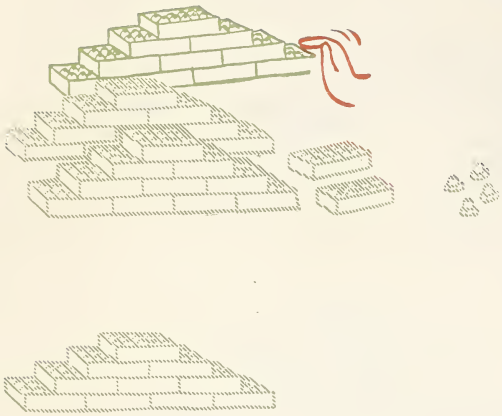
F Put 10 of the 12 boxes of ten in a pile of 100 candle holders. There are 2 boxes of 10 left over.

$$\begin{array}{r} {\scriptstyle 1} \\ 235 \\ 189 \\ \hline 24 \end{array}$$

12 tens equal 1 hundred 2 tens.

Write 2 here to show there are 2 tens in the answer.

Now turn the page.



G

Put the new pile of 100 with the other hundreds.

Write 1 in hundreds' place to show that there is 1 more hundred.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 235 \\ +\ 189 \\ \hline 24 \end{array}$$

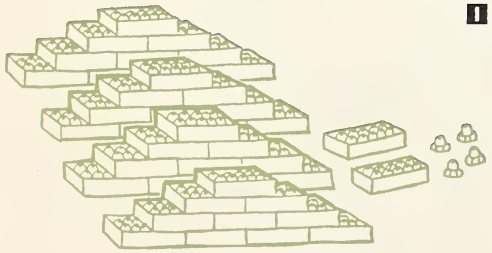
H

Put the piles of 100 together.

Add the hundreds. There are 4 hundreds.

$$\begin{array}{r} {\scriptstyle 1\ 1} \\ 235 \\ +\ 189 \\ \hline 424 \end{array}$$

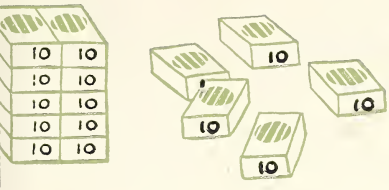
Write 4 in hundreds' place in the answer.



I

There are 424 candle holders in all.

$235 + 189 = 424$

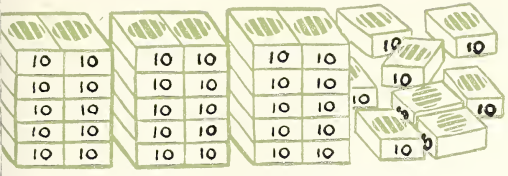


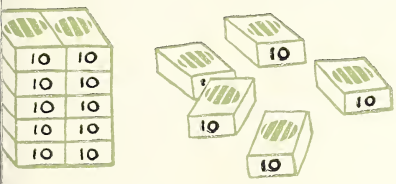
think

A

There are 150 birthday candles on one shelf in the store and 380 birthday candles on another shelf. How many candles are there in the store?

$150 + 380 = \square$ ← You must find this number.



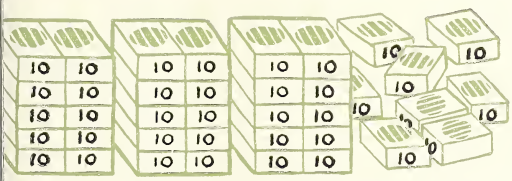


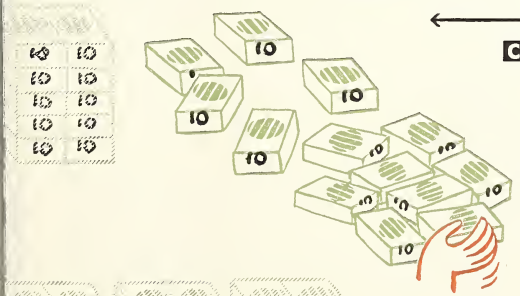
B

← Are there any candles to put together that are not in boxes?

$$\begin{array}{r} 150 \\ +\ 380 \\ \hline 0 \end{array}$$

← Why must you write 0 here?





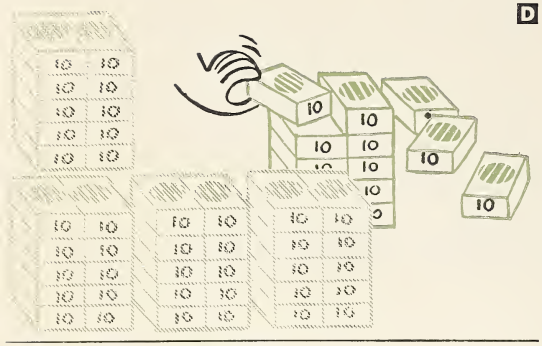
C

← What do you put together first?

← What do you add?
How many tens are there?

$$\begin{array}{r} 150 \\ +\ 380 \\ \hline 0 \end{array}$$

Now turn the page.

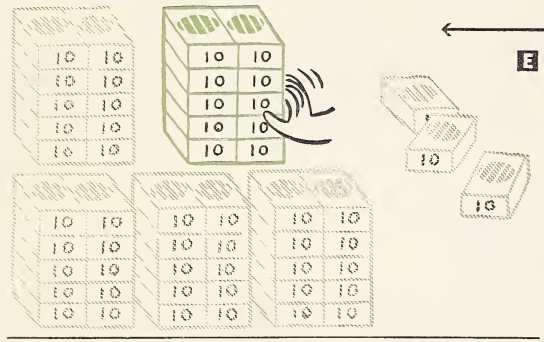


D

What do you do with the 13 boxes of 10 candles?

$$\begin{array}{r} 150 \\ 380 \\ \hline 30 \end{array}$$

Why do you write 3 here?

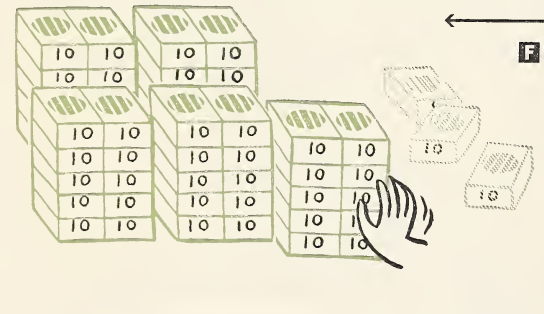


E

What do you do with the new pile of 100 candles?

$$\begin{array}{r} {\scriptstyle 1} \\ 150 \\ 380 \\ \hline 30 \end{array}$$

Why do you write the 1 here?



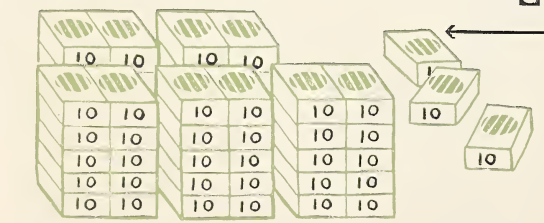
F

What do you put together now?

$$\begin{array}{r} {\scriptstyle 1} \\ 150 \\ 380 \\ \hline 530 \end{array}$$

Now what do you add? How many hundreds are there?

What does this 5 show?



G

There are ▒ candles in the store.

$150 + 380 = ▒$

try

A 270 boys and 258 girls go to the Field School. How many children go to the Field School?
270 + 258 = ▒

```
  1
 270
 258
-----
 528
```

← Either remember this hundred or write it.

B One week the children at the Field School bought 436 bottles of white milk and 829 bottles of chocolate milk. The children bought how many bottles of milk that week?
436 + 829 = ▒

```
   1
 436
 829
------
1265
```

← There are 12 hundreds. Write 12 hundreds as 1 thousand 2 hundreds.

C 383 + 27 = ▒ **D** 241 + 507 = ▒ **E** 605 + 706 = ▒ **F** 986 + 74 = ▒

C	D	E	F
383	241	605	986
27	507	706	74
410	748	1311	1060

do

A 130 children were on the school playground. 65 more children came out to play. How many children were on the playground then?
130 + 65 = ▒

B 249 children saw a school circus in the morning, and 232 children saw it in the afternoon. How many children saw the circus that day?
249 + 232 = ▒

C 816 + 242 = ▒
D 235 + 375 = ▒
E 92 + 137 = ▒
F 501 + 429 = ▒
G 854 + 67 = ▒
H 670 + 538 = ▒
I 908 + 809 = ▒

J 904 + 206 = ▒
K 178 + 192 = ▒
L 255 + 85 = ▒
M 530 + 460 = ▒
N 716 + 582 = ▒
O 390 + 166 = ▒
P 231 + 471 = ▒

A 900 + 700 = ▒
B 820 + 95 = ▒
C 633 + 285 = ▒
D 417 + 162 = ▒
E 809 + 629 = ▒
F 275 + 428 = ▒
G 372 + 900 = ▒

Now you should be able to add any numbers with three figures in them.

Learning how

Now you will learn how to add amounts of money, using numbers that mean dollars and cents.

See

A Mary had 53¢. Her mother gave her 28¢ more. Then Mary had how much money?

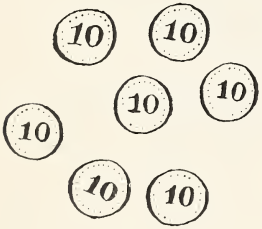
53¢ + 28¢ = ▒

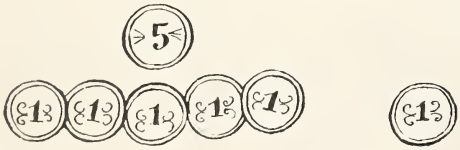
You must find this number.

53
28
81 ← You know that 81 means 81¢.

Add just as you do with any numbers. When you add 53 and 28, your answer is 81.

B When you add amounts of money, you write the numbers with points and dollar signs.





$.53 + $.28 = ▒

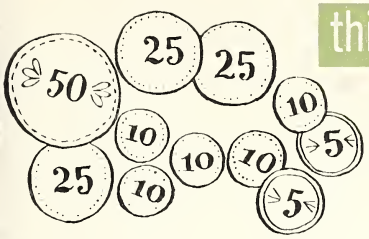
$.53
$.28
$.81 ←

Keep the points in a line one under the other.

Remember to put a point and dollar sign in the answer.

← Mary had $.81.

$.53 + $.28 = $.81



think

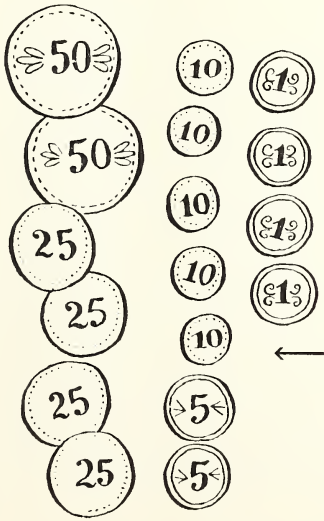
A Don earned $1.85 Monday afternoon. He earned $.79 on Tuesday morning. How much money did he earn altogether?

$1.85 + $.79 = ▒

You must find this number.

185 ← You can think of these numbers
79 ← as meaning cents.
264 ← 264 means 264 cents or ▒ dollars and ▒ cents.

B When you add amounts of money, how should you write the numbers?



What must you remember about the points?

$1.85
$ .79
$2.64 ← What do you write in your answer?

How much did Don earn?
$1.85 + $.79 = ▒

try

A Jack has 63¢. Tom has 57¢.
The two boys have how much money in all?
$.63 + $.57 = ▭

You do not need to write this dollar sign. →

$ .63
$ .57
$1.20

B Betty spent 26¢ for a toy, 15¢ for candy, and 92¢ for a pen. How much money did she spend altogether?
$.26 + $.15 + $.92 = ▭

$ .26
.15
.92
$1.33

C $1.18 + $2.21 = ▭

$1.18
2.21
$3.39

D $.09 + $.81 + $.42 = ▭

$ .09
.81
.42
$1.32

E $1.37 + $.98 = ▭

$1.37
.98
$2.35

do

Add

A 12¢, 35¢, 20¢
B $1.42, $.16, $.21
C $.74, $.82, $.69
D 37¢, 24¢, 65¢
E 52¢, 85¢, 8¢
F 19¢, 32¢, 12¢
G $2.18, $3.41, $.37
H 33¢, 41¢, 35¢
I $.14, $.79
J 67¢, 22¢, 54¢

K 94¢ + 52¢ + 18¢ = ▭
L $.10 + $1.14 = ▭
M 12¢ + 8¢ + 5¢ = ▭
N 76¢ + 22¢ = ▭
O $1.32 + $1.24 = ▭
P 75¢ + 60¢ + 12¢ = ▭
Q $.45 + $.09 = ▭
R $5.10 + 16¢ = ▭
S 22¢ + 89¢ = ▭
T $.80 + $3.45 = ▭
U 24¢ + 54¢ = ▭

A $3.15 + $1.20 + $1.82 = ▭
B 65¢ + 38¢ + 97¢ = ▭
C $1.35 + $.18 + $1.04 = ▭
D $2.88 + $7.17 = ▭
E $.75 + $3.12 + $.44 = ▭
F $1.50 + 16¢ + 11¢ = ▭
G $4.99 + $.56 + $1.47 = ▭
H $.21 + $.45 + $.06 = ▭
I $1.24 + $.06 + $.78 = ▭
J $.66 + $.19 + $.08 = ▭
K $2.26 + $3.40 + $1.17 = ▭

Now you should be able to add amounts of money.

Checking up

Test 1

A 35 + 8 = ▢
B 27 + 9 = ▢
C 64 + 5 = ▢
D 97 + 3 = ▢
E 49 + 9 = ▢
F 16 + 4 = ▢
G 53 + 9 = ▢
H 74 + 7 = ▢

Test 2

A 4 + 5 + 8 = ▢
B 7 + 1 + 5 + 3 = ▢
C 6 + 4 + 7 + 2 = ▢
D 3 + 9 + 5 + 8 = ▢
E 3 + 5 + 6 + 4 = ▢
F 8 + 7 + 6 = ▢
G 9 + 9 + 5 = ▢
H 8 + 6 + 7 + 3 = ▢

Test 3

A 22 + 45 = ▢
B 36 + 28 = ▢
C 53 + 17 = ▢
D 89 + 93 = ▢
E 70 + 46 = ▢
F 65 + 75 = ▢
G 82 + 36 = ▢
H 58 + 47 = ▢

Test 4

A 32 + 14 + 43 = ▢
B 50 + 15 + 22 = ▢
C 15 + 19 + 27 = ▢
D 30 + 28 + 31 = ▢
E 62 + 76 + 45 = ▢
F 88 + 75 + 40 = ▢
G 57 + 62 + 24 = ▢
H 95 + 48 + 31 = ▢

Test 5

A 341 + 532 = ▢
B 426 + 257 = ▢
C 580 + 378 = ▢
D 816 + 48 = ▢
E 749 + 56 = ▢
F 467 + 375 = ▢
G 921 + 879 = ▢
H 618 + 497 = ▢

Test 6

A $1.45 + $2.50 = ▢
B $.76 + $.98 = ▢
C $.30 + $.79 + $.46 = ▢
D $5.00 + $2.83 = ▢
E $2.68 + $.95 = ▢
F 57¢ + 18¢ + 71¢ = ▢
G $4.25 + $3.35 = ▢
H $8.03 + $5.46 = ▢

Keeping skillful

A 42 = 3 tens ▢ ones
B 39 = ▢ tens 19 ones
C 70 = ▢ tens ▢ ones
D 56 = ▢ tens ▢ ones
E 87 = ▢ tens ▢ ones
F 68 = ▢ tens ▢ ones
G 24 = ▢ ten ▢ ones
H 40 = ▢ tens ▢ ones
I 91 = ▢ tens ▢ ones
J 33 = ▢ tens ▢ ones
K 75 = ▢ tens ▢ ones

A 3 quarts = ▢ pints
B 5 yards = ▢ feet
C 3 gallons = ▢ quarts
D 9 feet = ▢ yards
E 8 pints = ▢ quarts
F 2 yards = ▢ feet
G 8 quarts = ▢ pints
H 16 quarts = ▢ gallons
I 2 gallons = ▢ pints
J 12 pints = ▢ quarts
K 12 feet = ▢ yards

A 18 ÷ 9 = ▢
B 16 ÷ ▢ = 4
C 12 ÷ ▢ = 2
D 18 ÷ 6 = ▢
E 14 ÷ 7 = ▢
F 10 ÷ ▢ = 5
G 15 ÷ 3 = ▢
H 16 ÷ ▢ = 2
I 12 ÷ 3 = ▢
J 18 ÷ 2 = ▢
K 15 ÷ 5 = ▢

Using arithmetic

A 240 boys and 261 girls came to the Toy and Book Fair at the Field School. How many children came to the fair?

B Jim bought 3 balloons at the fair. The balloons cost 6¢ apiece. How much did all 3 balloons cost?

C Ellen bought a box of crayons for 15¢ and a balloon for 6¢. The balloon cost how many fewer cents than the crayons?

D Dick spent 19¢ for a whistle and 39¢ for a puzzle. How much did he spend for the two toys?

E At the fair a girl put 18 doll chairs into boxes. She put 2 doll chairs into each box. How many boxes did she use?

F The girl had 14 games to sell. She sold 8 of them. How many games did she have left?

G Tom bought a package of 16 airplane stamps. He shared them equally with Bill. How many stamps did each boy get?

H Don bought 7 little books. Mary bought 10 little books. Don bought how many fewer books than Mary?

I Carol's father spent $4.40 for books and $3.75 for toys. How much did he spend for books and toys?

J Carol's father bought 5 books and 11 toys at the fair. He bought how many more toys than books?

K Carol's father gave 3 of the 11 toys to Carol and the other toys to Jack and Don. How many toys did he give to Jack and Don?

L Jack bought 2 boxes of pencils at the fair. Each box had 8 pencils in it. How many pencils did he buy?

M Nancy paid fifteen cents for a box of toy butterflies. There were three butterflies in the box. They cost how many cents apiece?

N Bob saw twelve different books about dogs and seven different books about cats. He saw how many more books about dogs than about cats?

O Betty had thirteen paper dolls at home. She bought 8 more paper dolls at the fair. Then she had how many paper dolls?

P Mary bought 2 toy mice for 9¢ apiece. How much did she pay for the two toy mice?

Q Don bought a package of 16 boat stamps. He gave 7 of them to Bob. Then Don had how many boat stamps?

R Mary had 9 doll chairs at home. She bought more at the fair. She said to June, "Now I have 12 chairs." How many doll chairs did she buy at the fair?

S At one table a girl sold 17 toy cats and 8 toy elephants. She sold how many fewer elephants than cats?

T At another table a boy sold 12 big puzzles and 48 small puzzles. How many puzzles in all did he sell?

U Three boys bought a box of 12 candy sticks and shared them equally. There were how many candy sticks for each boy?

V Bill paid $1.15 for a saw and $.29 for a hammer. How much did he pay for these two things?

W Mary's mother carried 4 packages home from the fair. There were 4 toys in each package. There were how many toys in all the packages?

X Ellen's mother wanted to buy 8 storybooks for the children. She picked out 3 books. How many more books did she need to pick out?

Keeping skillful

A $16-7=$ ▭	A $4\times4=$ ▭	A 1 quarter = 2 dimes ▭ pennies
B $15\div5=$ ▭	B $13-7=$ ▭	B 1 dollar = 1 half dollar ▭ dimes
C $2\times6=$ ▭	C $12\div2=$ ▭	C 1 quarter = 1 dime ▭ pennies
D $18\div3=$ ▭	D $18-9=$ ▭	D 1 half dollar = 3 dimes ▭ nickels
E $16-8=$ ▭	E $16\div8=$ ▭	E 1 dollar = 2 quarters ▭ pennies
F $4\times3=$ ▭	F $6\times3=$ ▭	F 1 half dollar = 4 dimes ▭ nickels
G $14\div7=$ ▭	G $14-6=$ ▭	G 1 quarter = 3 nickels ▭ pennies
H $9\times2=$ ▭	H $3\times4=$ ▭	H 1 dollar = 2 quarters ▭ nickels
I $16\div4=$ ▭	I $18\div2=$ ▭	I 1 dollar = 8 dimes ▭ nickels
J $15-8=$ ▭	J $15\div3=$ ▭	J 1 half dollar = 1 quarter ▭ nickels
K $3\times5=$ ▭	K $13-4=$ ▭	K 1 quarter = 1 dime ▭ nickels
L $12\div3=$ ▭	L $14-9=$ ▭	L 1 dollar = 1 half dollar ▭ quarters
M $17-9=$ ▭	M $18\div6=$ ▭	M 1 half dollar = ▭ dimes 4 nickels
N $7\times2=$ ▭	N $11-3=$ ▭	N 1 dollar = ▭ quarters 5 nickels

Learning how

In this lesson you will learn how to subtract numbers with two figures in them.

see

A

Bob has 53 football cards. He is going to give 26 of them to his friends. How many football cards will he have left?

$53 - 26 = \square$ ← You must find this number.

B

Before you can take away 6 cards, you must open one of the piles of 10 cards and put it with the 3 cards.

$$\begin{array}{r} 53 \\ 26 \\ \hline \end{array}$$

Before you can subtract 6 ones, you must have more ones. Take one of the 5 tens and put it with the 3 ones.

C

Now you have 4 piles of 10 cards and also 13 cards.

$$\begin{array}{r} 4\ 13 \\ \not{5}\not{3} \\ 26 \\ \hline \end{array}$$

Now you have 4 tens and 13 ones.

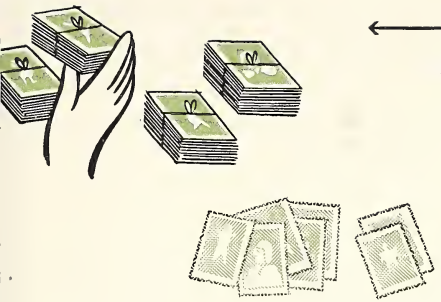
D

Take away 6 cards.

$$\begin{array}{r} 4\ 13 \\ \not{5}\not{3} \\ 26 \\ \hline 7 \end{array}$$

Subtract 6 ones. There are 7 ones left.

Write 7 here to show that there are 7 ones in the answer.



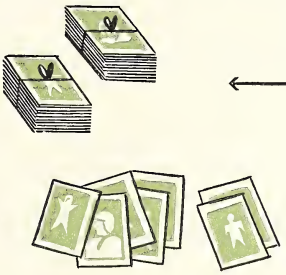
Next take away 2 piles of 10 cards.

E

Now subtract 2 tens from 4 tens.
2 tens are left.

$$\begin{array}{r} {\scriptstyle 4\ \ 13} \\ \not{5}\ \not{3} \\ 2\ 6 \\ \hline 2\ 7 \end{array}$$

Write 2 here to show 2 tens in the answer.

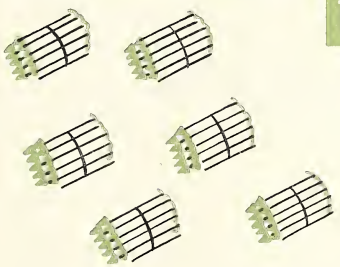


F

Bob will have 27 cards left.
$53 - 26 = 27$

---

think



A

Ann had 60 crayons at home. She took 34 of them to school. Then she had how many crayons at home?

$60 - 34 = \square$

You must find this number.

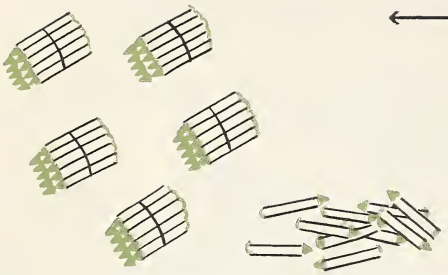
B

Why must you open 1 bundle of 10 crayons before you can take away 4 crayons?

What must you do before you can subtract 4 ones?

$$\begin{array}{r} 6\ 0 \\ 3\ 4 \\ \hline \end{array}$$

Now turn the page.

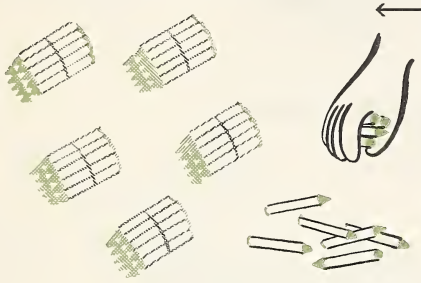


How many bundles of 10 crayons are there now? How many other crayons are there?

C

5 10
6 0
3 4

Now you have ▤ tens and ▤ ones.



How many of the 10 crayons should you take away? How many crayons are left?

D

Subtract 4 ones from ▤ ones.

5 10
6 0
3 4

6

What does this 6 show?

How many bundles of 10 crayons should you take away?

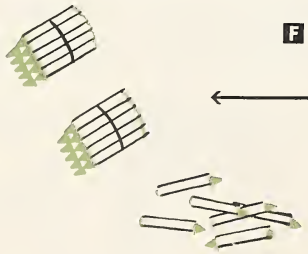
E

Now subtract ▤ tens from ▤ tens.

5 10
6 0
3 4

2 6

What does this 2 show?



F

Ann had ▤ crayons left at home.

60 − 34 = ▤

try

A Ann had 48 pennies. She spent 39 pennies for a large box of crayons. How many pennies did she have then?

$48 - 39 = \square$

$$\begin{array}{r} {\scriptstyle 3\ 18} \\ 4\not{8} \\ -\ 39 \\ \hline 9 \end{array}$$ ← Either remember these figures or write them.

B $31 - 20 = \square$

$$\begin{array}{r} 31 \\ -\ 20 \\ \hline 11 \end{array}$$

C $52 - 37 = \square$

$$\begin{array}{r} 52 \\ -\ 37 \\ \hline 15 \end{array}$$

D $80 - 15 = \square$

$$\begin{array}{r} 80 \\ -\ 15 \\ \hline 65 \end{array}$$

E $97 - 5 = \square$

$$\begin{array}{r} 97 \\ -\ 5 \\ \hline 92 \end{array}$$

do

A There were 43 puzzles in a store. A clerk sold 9 of them to the children. How many puzzles were left in the store?

$43 - 9 = \square$

B Mother put 36 cookies on a tray. The children ate 18 of them. How many cookies were left?

$36 - 18 = \square$

C Bill had 51 baseball cards. He gave 24 of them to Jack. How many baseball cards did Bill keep?

$51 - 24 = \square$

D Carol had 42 pieces of candy. At a party her friends ate 31 pieces of the candy. How many pieces of candy were left?

$42 - 31 = \square$

E $82 - 15 = \square$
F $95 - 35 = \square$
G $37 - 4 = \square$
H $71 - 43 = \square$
I $25 - 5 = \square$
J $38 - 29 = \square$
K $63 - 15 = \square$
L $70 - 32 = \square$

M $40 - 16 = \square$
N $71 - 37 = \square$
O $54 - 20 = \square$
P $78 - 58 = \square$
Q $30 - 21 = \square$
R $57 - 16 = \square$
S $45 - 36 = \square$
T $88 - 41 = \square$

A $44 - 17 = \square$
B $80 - 38 = \square$
C $75 - 9 = \square$
D $33 - 4 = \square$
E $82 - 67 = \square$
F $91 - 43 = \square$
G $64 - 37 = \square$
H $76 - 52 = \square$

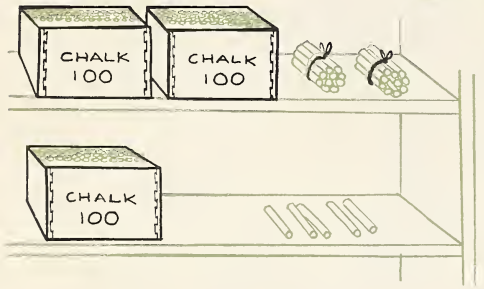
I $68 - 19 = \square$
J $50 - 15 = \square$
K $87 - 49 = \square$
L $48 - 18 = \square$
M $92 - 54 = \square$
N $61 - 47 = \square$
O $83 - 75 = \square$
P $97 - 30 = \square$

Now you should know how to subtract numbers with two figures in them.

Learning how

In this lesson you will learn how to subtract numbers with three figures in them.

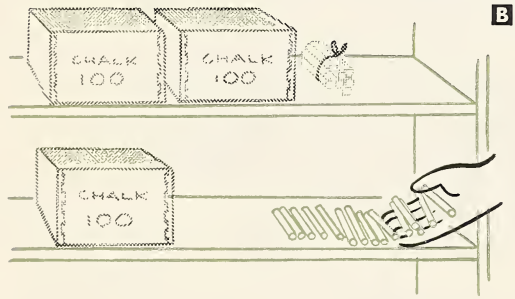
see



A

There were 325 pieces of chalk in the schoolroom. One month 187 pieces were used. How many pieces of chalk were left?

$325 - 187 = \square$ ← You must find this number.

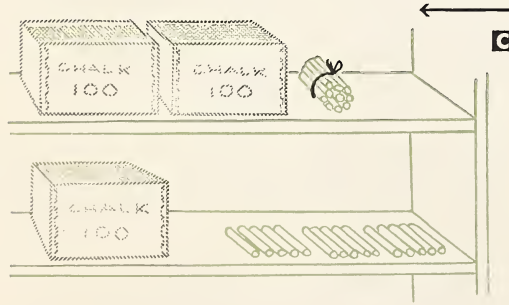


B

← Before you can take away 7 pieces of chalk, you must open one bundle of 10 pieces of chalk.

$$\begin{array}{r} 2 \\ 325 \\ 187 \\ \hline \end{array}$$

← Before you can subtract 7 ones, you must have more ones. Take one of the 2 tens and put it with the 5 ones.

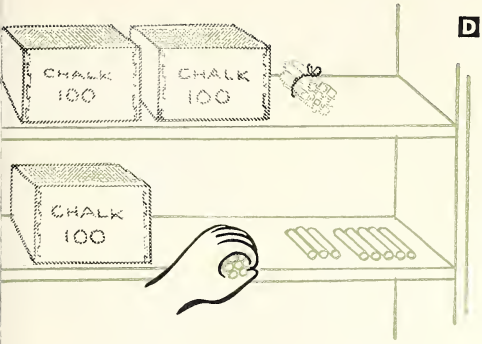


C

← Now you have 1 bundle of 10 pieces of chalk and also 15 pieces of chalk.

$$\begin{array}{r} 1\ 15 \\ 3\not{2}\not{5} \\ 187 \\ \hline \end{array}$$

← Now you have 1 ten and 15 ones.



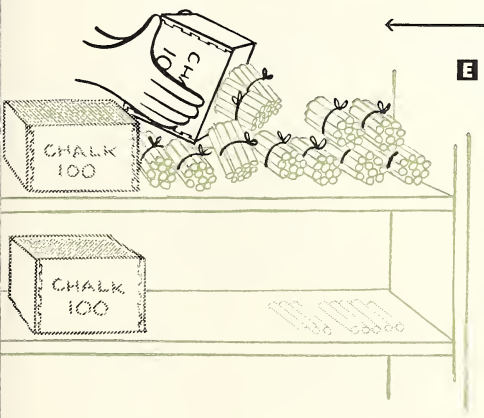
D

← Take away 7 pieces of chalk.

$$\begin{array}{r} {\scriptstyle 1\ 15} \\ 3\not{2}\not{5} \\ 187 \\ \hline 8 \end{array}$$

← Subtract 7 ones. There are 8 ones left.

← Write 8 here to show there are 8 ones in the answer.

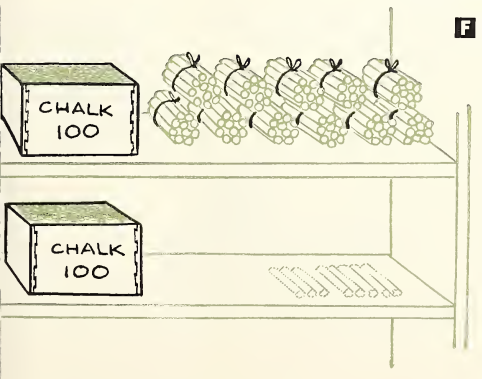


E

← Before you can take away 8 bundles of 10, you must empty one of the boxes of 100 pieces of chalk.

$$\begin{array}{r} {\scriptstyle 1\ 15} \\ 3\not{2}\not{5} \\ 187 \\ \hline 8 \end{array}$$

← Before you can subtract 8 tens, you must have more tens. You will take one of the 3 hundreds and put it with the 1 ten.



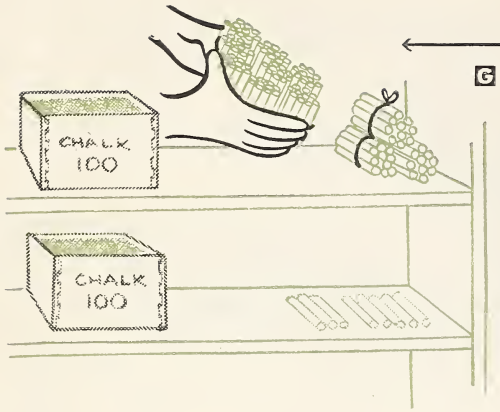
F

← Now you have 2 boxes of 100 pieces and 11 bundles of 10 pieces.

$$\begin{array}{r} {\scriptstyle 11} \\ {\scriptstyle 2\ \not{1}\ 15} \\ 3\not{2}\not{5} \\ 187 \\ \hline 8 \end{array}$$

← Now you have 2 hundreds and 11 tens.

Now turn the page.



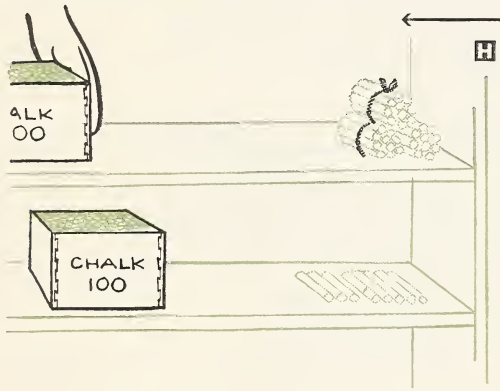
G

Take away 8 bundles of 10 pieces.

Subtract 8 tens from 11 tens.
There are 3 tens left.

$$\begin{array}{r} {\scriptstyle 11} \\ 2\,\not{3}\,{\scriptstyle 15}\not{5} \\ 187 \\ \hline 38 \end{array}$$

Write 3 here to show that there will be 3 tens in the answer.



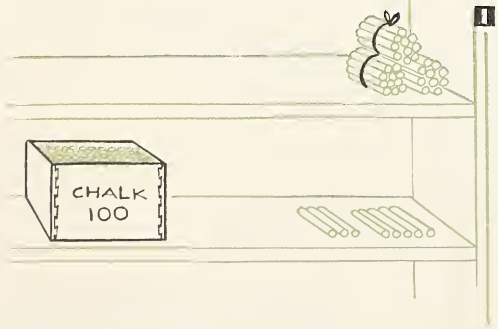
H

Now take away 1 box of 100 pieces.

Subtract 1 hundred from
2 hundreds.

$$\begin{array}{r} {\scriptstyle 11} \\ 2\,\not{3}\,{\scriptstyle 15}\not{5} \\ 187 \\ \hline 138 \end{array}$$

Write 1 here to show there will be 1 hundred in the answer.



I

138 pieces of chalk were left.

$325 - 187 = 138$

think

A On Monday there were 205 candy sticks in the store. That week 176 of them were sold. How many candy sticks were left?

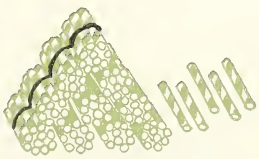
$205 - 176 = \square$ ← You must find this number.

B Why must you empty one of the boxes of 100 candy sticks before you can take away 6 candy sticks?

What must you do before you can subtract 6 ones?

$$\begin{array}{r} 2\,0\,5 \\ 1\,7\,6 \\ \hline \end{array}$$

C Now you have 1 box of 100 candy sticks and ▒ bundles of 10 candy sticks.



You have ▒ hundred and ▒ tens.

$$\begin{array}{r} {\scriptstyle 1\ 10} \\ 2\,\not{0}\,5 \\ 1\,7\,6 \\ \hline \end{array}$$

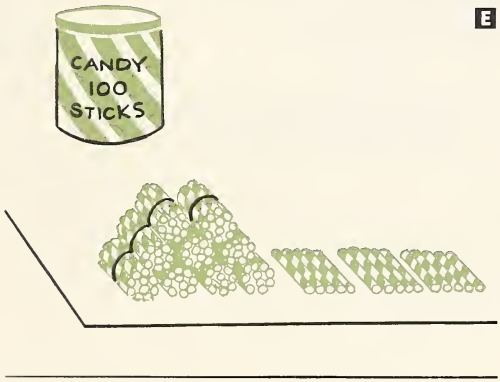
Now turn the page.

Why must you now open a bundle of 10 candy sticks?

D

1 10
2 0 5
1 7 6

You need more ones. How will you get them?



How many boxes of 100 sticks are there now? How many bundles of 10 are there? How many other sticks are there?

E

9
1 ~~10~~ 15
2 0 5
1 7 6

You now have 1 hundred, ▒ tens, and ▒ ones.

Take away ▒ candy sticks from the 15 candy sticks. How many are left?

F

9
1 ~~10~~ 15
2 0 ~~5~~
1 7 6

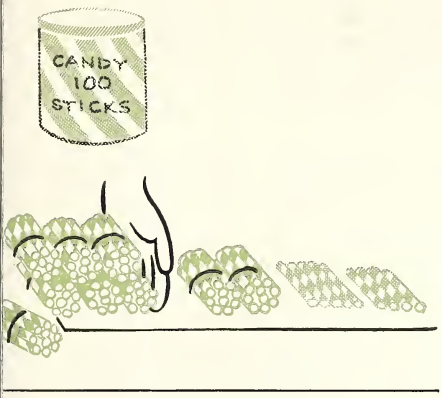
Subtract 6 ones from ▒ ones.

9

What does the 9 stand for?

How many bundles of 10 candy sticks should you take away?

G



Now subtract ▒ tens from ▒ tens.

$$\begin{array}{r} {\scriptstyle 9} \\ 1\ \cancel{10}\ 15 \\ 2\ \cancel{0}\ \cancel{5} \\ 1\ 7\ 6 \\ \hline 2\ 9 \end{array}$$

What does the 2 stand for?

Now take away a box of ▒ candy sticks.

H

How many hundreds do you subtract?

$$\begin{array}{r} {\scriptstyle 9} \\ 1\ \cancel{10}\ 15 \\ 2\ \cancel{0}\ \cancel{5} \\ 1\ 7\ 6 \\ \hline 2\ 9 \end{array}$$

You do not write a figure in hundreds' place in the answer. Why?

▒ candy sticks were left.

I $205 - 176 = ▒$

try

A It took Mary two weeks to read a new storybook. The storybook had 252 pages. The first week Mary read 138 pages. How many pages did she read the second week?

252 − 138 = ▒

4 12
2 5 2
1 3 8
1 1 4

← Either remember these figures or write them.

B 674 − 256 = ▒

674
256
418

C 806 − 337 = ▒

806
337
469

D 732 − 582 = ▒

732
582
150

E 417 − 68 = ▒

417
68
349

do

A There were 400 pieces of drawing paper in the schoolroom. One week the children used 154 pieces. How many pieces were left?

400 − 154 = ▒

B Bob has 124 football and baseball stamps. 50 of them are football stamps. The others are baseball stamps. He has how many baseball stamps?

124 − 50 = ▒

C 226 − 109 = ▒
D 952 − 476 = ▒
E 876 − 241 = ▒
F 460 − 390 = ▒
G 630 − 221 = ▒
H 583 − 95 = ▒
I 304 − 67 = ▒
J 700 − 415 = ▒
K 937 − 488 = ▒
L 206 − 102 = ▒
M 329 − 59 = ▒
N 831 − 108 = ▒

O 716 − 645 = ▒
P 300 − 293 = ▒
Q 708 − 400 = ▒
R 327 − 85 = ▒
S 114 − 82 = ▒
T 900 − 259 = ▒
U 131 − 82 = ▒
V 475 − 172 = ▒
W 628 − 309 = ▒
X 450 − 75 = ▒
Y 726 − 684 = ▒
Z 949 − 538 = ▒

A 871 − 293 = ▒
B 698 − 427 = ▒
C 303 − 275 = ▒
D 464 − 172 = ▒
E 600 − 58 = ▒
F 725 − 435 = ▒
G 259 − 46 = ▒
H 380 − 243 = ▒
I 546 − 381 = ▒
J 172 − 55 = ▒
K 924 − 877 = ▒
L 500 − 218 = ▒

Now you should be able to subtract any numbers with three figures in them.

Learning how

Now you will learn how to subtract amounts of money, using numbers that mean dollars and cents.

see

A

Don had 54¢. He bought a puzzle that cost 26¢. How much money did he have left?

$54¢ - 26¢ = \square$ ← You must find this number.

Subtract just as you do with any numbers.

$$\begin{array}{r} 54 \\ 26 \\ \hline 28 \end{array}$$

When you subtract 26 from 54, your answer is 28. You know that 28 means 28¢.

B

When you subtract amounts of money, you write the numbers with points and dollar signs.

$\$.54 - \$.26 = \square$

Keep the points in a line, one under the other.

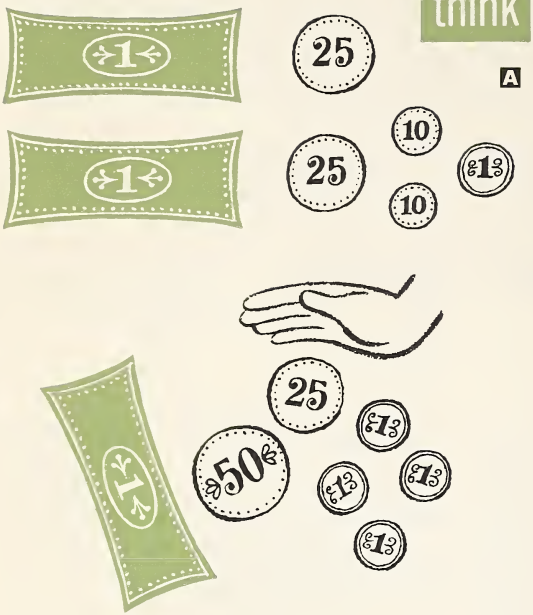
$$\begin{array}{r} \$.54 \\ \$.26 \\ \hline \$.28 \end{array}$$

Remember to put a point and dollar sign in the answer.

← Don had $.28 left.

$\$.54 - \$.26 = \$.28$

think



A Carol had $4.50. She bought Don a baseball cap that cost $1.79. Then she had how much money?

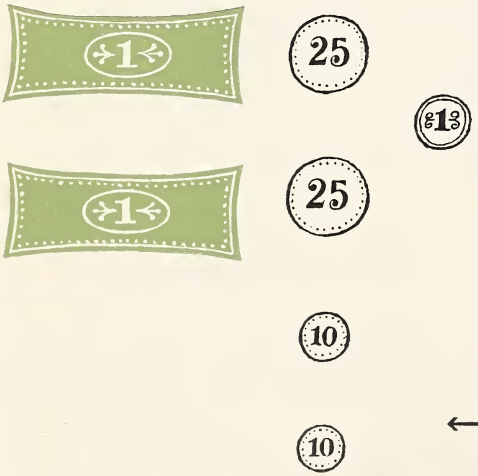
$4.50 − $1.79 = ▒

↑ You must find this number.

You can think of these numbers as meaning cents.

450
179
271 ← 271 means 271 cents or ▒ dollars and ▒ cents.

B When you subtract amounts of money how should you write the numbers?



What must you remember about the points?

$4.50
$1.79
$2.71

Remember to put a point in your answer.

← Carol had ▒ left.
$4.50 − $1.79 = ▒

try

A Tom had $1.20. He spent $1.05 for a baseball. How much money did he have left?

$1.20 − $1.05 = ▒

You do not need to write this dollar sign. →

$$\begin{array}{r} \$1.20 \\ \$1.05 \\ \hline \$\ .15 \end{array}$$

B Dick had 69¢ in his bank. He spent 25¢ for a package of peanut butter cookies. How much money was left in his bank?

$.69 − $.25 = ▒

$$\begin{array}{r} \$\ .69 \\ .25 \\ \hline \$\ .44 \end{array}$$

C $2.18 − $.72 = ▒

$$\begin{array}{r} \$2.18 \\ .72 \\ \hline \$1.46 \end{array}$$

D $4 − 56¢ = ▒

$$\begin{array}{r} \$4.00 \\ .56 \\ \hline \$3.44 \end{array}$$

E $8.42 − $5 = ▒

$$\begin{array}{r} \$8.42 \\ 5.00 \\ \hline \$3.42 \end{array}$$

do

Subtract

A 87¢ from 92¢
B $1.43 from $2.17
C 40¢ from 63¢
D 26¢ from 42¢
E $1.18 from $1.27
F 39¢ from 89¢
G $4.05 from $4.16
H $.07 from $.15
I 21¢ from 25¢
J $1.69 from $2.70
K 94¢ from $3.02
L 48¢ from $2.00

M 87¢ − 21¢ = ▒
N $2.01 − $.63 = ▒
O $1.15 − $.97 = ▒
P $4.16 − $3.64 = ▒
Q $.71 − 13¢ = ▒
R 69¢ − 42¢ = ▒
S 54¢ − 9¢ = ▒
T $1.63 − $1.55 = ▒
U $5.22 − $4.18 = ▒
V $1.48 − $1.32 = ▒
W $3.00 − 53¢ = ▒
X $7.28 − $4.49 = ▒
Y $3.71 − $.96 = ▒

A $1.05 − $.60 = ▒
B $6.50 − $1.95 = ▒
C $4.00 − 72¢ = ▒
D $.68 − $.24 = ▒
E $3.17 − $.40 = ▒
F 76¢ − 59¢ = ▒
G $6.00 − $5.16 = ▒
H $1.51 − 57¢ = ▒
I $3.06 − $2.09 = ▒
J $8.56 − $2.00 = ▒
K 38¢ − 14¢ = ▒
L $.73 − $.50 = ▒
M $4.05 − $1.79 = ▒

Now you can subtract amounts of money.

Checking up

Test 1

A $71 - 48 =$ ▒
B $67 - 32 =$ ▒
C $85 - 9 =$ ▒
D $56 - 20 =$ ▒
E $70 - 24 =$ ▒
F $68 - 48 =$ ▒
G $93 - 85 =$ ▒
H $42 - 19 =$ ▒

Test 2

A $628 - 249 =$ ▒
B $856 - 320 =$ ▒
C $732 - 518 =$ ▒
D $945 - 381 =$ ▒
E $570 - 53 =$ ▒
F $801 - 468 =$ ▒
G $523 - 216 =$ ▒
H $400 - 139 =$ ▒

Test 3

A $\$.48 - \$.19 =$ ▒
B $\$3.26 - \$1.43 =$ ▒
C $\$4.05 - \$.86 =$ ▒
D $\$.90 - \$.35 =$ ▒
E $\$1.73 - \$1.43 =$ ▒
F $\$5.00 - \$3.39 =$ ▒
G $\$1.68 - \$.79 =$ ▒
H $82¢ - 36¢ =$ ▒

Thinking straight

Sometimes you must change the hundreds before you can subtract the ones. Here is a new way to do this.

A $300 - 182 =$ ▒

```
 300
 182
```

Before you can subtract 2 ones, you must have more ones. How can you get some ones?

```
 300
 182
```

Think of 300 as 30 tens.

```
29 10
~~300~~
 182
 118
```

Then take one of the 30 tens and put it with the ones. Now you have 29 tens and 10 ones. You can subtract.

B $605 - 39 =$ ▒

```
 605
  39
```

What must you do before you can subtract 9 ones?

```
59 15
~~605~~
  39
 566
```

Think of 605 as 59 tens ▒ ones. Then subtract.

C $500 =$ ▒ tens, or 49 tens ▒ ones

D $207 = 20$ tens ▒ ones, or ▒ tens 17 ones

A $400 - 228 =$ ▒
B $200 - 132 =$ ▒
C $801 - 435 =$ ▒
D $801 - 476 =$ ▒
E $500 - 179 =$ ▒
F $703 - 384 =$ ▒
G $302 - 67 =$ ▒
H $206 - 49 =$ ▒
I $600 - 91 =$ ▒
J $409 - 328 =$ ▒
K $700 - 85 =$ ▒
L $904 - 637 =$ ▒

Using arithmetic

A Bob had $5.08 in his bank. He took out $1.49 to pay for a new cap. How much money was left in his bank?

B Bill had $.97 in his bank. His father put in some more money. Then Bill emptied his bank and found he had $2.14. How much money had Bill's father put in Bill's bank?

C The children had 81 pieces of white chalk and 16 pieces of yellow chalk. They had how many fewer pieces of yellow chalk than of white chalk?

D At the candy store Carol bought 18 white candy mice and 24 chocolate mice. How many candy mice in all did Carol buy?

E Ann and Mary were making cookies. Mary cut out 18 cookies. Ann cut out 39 cookies. Ann cut out how many more cookies than Mary?

F June picked 32 flowers in a field. Betty picked 29 flowers in the field. The two girls picked how many flowers?

G Jack and Bob painted a garden fence that was 52 feet long. Jack painted 25 feet of the fence. How many feet did Bob paint?

H One week Jack earned $5.64, and Bob earned $6.10. How much money did the two boys earn that week?

I Nancy had 43 milk bottle caps. She gave 15 of them away. How many milk bottle caps did she keep?

J Bob had 213 baseball cards. Jack had 147 baseball cards. Jack had how many fewer baseball cards than Bob?

K There are 56 pieces in Betty's new puzzle. There are 72 pieces in Ann's puzzle. Ann's puzzle has how many more pieces than Betty's puzzle?

L Carol had $2.16 before she earned 55¢. How much money did she have then?

M Tom and Dick save coins of different kinds. Tom has 82 coins. Dick has 47 coins. Tom has how many more coins than Dick?

N Ellen read a storybook of 212 pages. Mary read a storybook of 256 pages. Ellen read how many fewer pages than Mary?

O Mary spent $.95 for a paintbox, $.37 for a small doll, and $.15 for a bag of peanuts. How much money in all did she spend?

P Don has 150 pictures of airplanes. Jack has 134 pictures of airplanes. Together they have how many pictures of airplanes?

Keeping skillful

When you add or subtract, how do you know that your answer is correct?

$63+47+85=$ ▒

What is the sum when you add down?
What is the sum when you add up?
If the two sums are the same, your work should be correct.
You have checked your work.

Some of these answers are not correct. Add down and then check your work by adding up. What is the correct answer?

A	B	C	D
36			71
28	650	293	82
41	789	758	46
95	1439	941	209

First add down. Then add up to check.

E $56+33+72=$ ▒
F $25+65+35=$ ▒
G $17+23+8=$ ▒
H $94+7+64=$ ▒
I $562+425=$ ▒
J $731+405=$ ▒
K $293+529=$ ▒
L $814+293=$ ▒

$374-196=$ ▒

First subtract.

$$\begin{array}{r} 374 \\ 196 \\ \hline 178 \end{array}$$

To check, add these numbers.

If the sum is 374, your work should be correct.

Some of these answers are not correct. Subtract and then check your work. What is the correct answer?

A	B	C	D	E
76	63	605	231	978
43	29	193	147	536
23	34	512	94	432

F	G	H	I	J
800	429	501	345	99
425	307	93	78	43
375	22	408	277	46

Subtract and check.

K $268-193=$ ▒
L $73-20=$ ▒
M $700-498=$ ▒
N $366-297=$ ▒
O $814-650=$ ▒
P $508-273=$ ▒
Q $52-18=$ ▒
R $200-113=$ ▒
S $473-82=$ ▒
T $95-68=$ ▒
U $650-548=$ ▒
V $784-96=$ ▒
W $902-475=$ ▒
X $658-73=$ ▒

Exploring problems

see

A

Tom had some records. His friends gave him 6 more records. Now he has 33 records. How many records did he have before his friends gave him the 6 records?

← You do not know how many records Tom had at first.

□ ← Number of records Tom had at first

← His friends gave him 6 more records.

B

□ + 6

↑ Number of records his friends gave him

← Now Tom has 33 records.

C

□ + 6 = 33

↓ Number of records Tom has now

↑ You must find this number.

---

compute

← You know Tom has 33 records now.

D

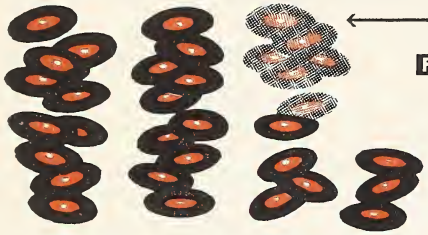
33 ← Number of records he has now

Now turn the page.

E

Think of a group of records equal in number to the records Tom's friends gave him.

6 ← Number of records Tom's friends gave him



F

Imagine that this group of 6 records is gone.

$$\begin{array}{r} 33 \\ -\ 6 \\ \hline \square \end{array}$$

← Subtract 6 from 33.

$$\begin{array}{r} 33 \\ -\ 6 \\ \hline 27 \end{array}$$

← The number left shows how many records Tom had to begin with. He had 27 records to begin with.

$\square + 6 = 33$ ← This number is 27. Tom had 27 records to begin with.

see

A

One day Bob picked up 24 shells and took them home. Then he counted all his shells and found he had 62 of them. How many shells did he have to begin with?

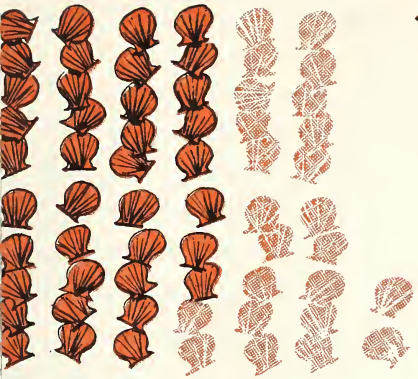
What does this stand for?

What does this number stand for?

$\square + 24 = 62$

What does this number stand for?

compute



How many shells does Bob have? Why do you imagine 24 of them are gone?

B

62
24 ← Should you add or subtract 24?

▒ ← What will this show?

▒ + 24 = 62 Bob had ▒ shells to begin with.

A After Ann made 18 nut cookies, she saw she had made 56 cookies in all. How many cookies did she make before she made the nut cookies?

▒ + 18 = 56

THINK Imagine that 18 nut cookies are gone. Subtract 18 from 56.

B After Jim had put 35¢ in his bank, he found he had $1.63 in it. How much money was in his bank before he put in the 35¢?

▒ + $.35 = $1.63

THINK Imagine that $.35 is gone. Subtract $.35 from $1.63.

C Nancy bought a box of 24 crayons. Then she had 41 crayons. How many did she have to begin with?

▒ + 24 = 41 Subtract 24 from 41.

D Don got a box of 12 tops for his birthday. He said, "Now I have 20 tops." How many tops did he have before his birthday?

▒ + 12 = 20 Subtract 12 from 20.

E Tom got 24 new baseball cards from his friends. He counted his cards and found he had 52 in all. Tom had how many baseball cards to begin with?

F After Mary earned 25¢ by helping her mother, she had $1.07. How much money did Mary have before she helped her mother?

G Dick's mother bought 3 quarts of milk on Saturday. She said, "I have bought 18 quarts of milk this week." How many quarts of milk did she buy before Saturday?

H Four boys went to the playground. Then there were 32 boys playing. How many boys were on the playground to begin with?

I One noon at school the children bought 102 bottles of chocolate milk and 83 bottles of white milk. They bought how many fewer bottles of white milk than of chocolate milk?

J Dick had $1.26. Then he earned some money by helping his father. Now he has $1.81. How much money did he earn helping his father?

K Tom is trying to save $1.75 to buy a baseball. He has saved $.96. How much more money does he need to buy the baseball?

L Carol took 7 apples to a picnic. The other children took 9 apples. How many apples did all the children take to the picnic?

M When Betty put 8 sandwiches on the picnic table, the children said, "Now we have 20 sandwiches." How many sandwiches did they have before Betty put down 8 sandwiches?

N Jim keeps all the different stamps he gets. After his sister gave him a package of 150 stamps, he found he had 215. He had how many stamps to begin with?

O Bill had 17 bird pictures. He got more bird pictures at the museum. Then he had 22 bird pictures. How many did he get at the museum?

In many of these problems you were finding out how many things there were to begin with.

Keeping skillful

A ▭ + 15 = 92
B ▭ + 73 = 105
C ▭ + 35 = 60
D ▭ + 264 = 571
E ▭ + 58 = 215
F ▭ + 9 = 33
G ▭ + 360 = 700
H ▭ + 296 = 524
I ▭ + 177 = 307

A 28 + ▭ = 51
B 76 + 84 = ▭
C 59 + ▭ = 90
D ▭ + 148 = 233
E 865 + 239 = ▭
F ▭ + 91 = 200
G 75 + ▭ = 306
H 409 + 298 = ▭
I 537 + ▭ = 800

A 82 − 37 = ▭
B 98 − 52 = ▭
C 105 − 25 = ▭
D 479 − 136 = ▭
E 582 − 247 = ▭
F 815 − 429 = ▭
G 737 − 542 = ▭
H 608 − 459 = ▭
I 400 − 325 = ▭

Thinking straight

$5+5=10$
$5+4=9$
$5+3=8$
$5+2=7$
$5+1=6$
$5+0=5$

$4+4=8$
$3+4=\square$
$2+4=\square$
$1+4=\square$
$0+4=\square$

A How is $5+4$ different from $5+5$?

B How is $5+3$ different from $5+4$?

C How is $5+0$ different from $5+1$?

D What is the answer when 0 is added to a number?

E How is $0+4$ different from $1+4$?

F What is the answer when a number is added to 0?

$5-1=4$
$5-2=3$
$5-3=2$
$5-4=1$
$5-5=0$

$6-5=1$
$6-4=\square$
$6-3=\square$
$6-2=\square$
$6-1=\square$
$6-0=\square$

A How is $5-2$ different from $5-1$?

B How is $5-5$ different from $5-4$?

C What is the answer when a number is subtracted from the same number?

D What is the answer when 0 is subtracted from a number?

A $2+0=\square$
B $0+4=\square$
C $4-0=\square$
D $8-8=\square$
E $9+0=\square$
F $3-3=\square$
G $5-0=\square$
H $0+1=\square$

I $0+8=\square$
J $6-6=\square$
K $7+0=\square$
L $2-0=\square$
M $0+3=\square$
N $9-9=\square$
O $5+0=\square$
P $1-0=\square$

A $9-0=\square$
B $0+5=\square$
C $2-2=\square$
D $7-0=\square$
E $1+0=\square$
F $5-5=\square$
G $0+7=\square$
H $8-0=\square$

I $1-1=\square$
J $0+2=\square$
K $3-0=\square$
L $4+0=\square$
M $8+0=\square$
N $4-4=\square$
O $6-0=\square$
P $6+0=\square$

Keeping skillful

A $3\times6=\square$
B $4\times4=\square$
C $5\times3=\square$
D $2\times6=\square$
E $9\times2=\square$
F $3\times4=\square$

G $8\times2=\square$
H $4\times3=\square$
I $2\times7=\square$
J $6\times3=\square$
K $7\times2=\square$
L $3\times5=\square$

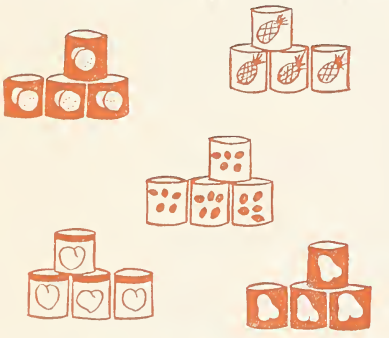
M $12\div6=\square$
N $15\div\square=5$
O $10\div\square=2$
P $18\div3=\square$
Q $14\div2=\square$
R $16\div\square=4$

S $12\div\square=3$
T $16\div2=\square$
U $9\div\square=3$
V $14\div7=\square$
W $18\div2=\square$
X $15\div5=\square$

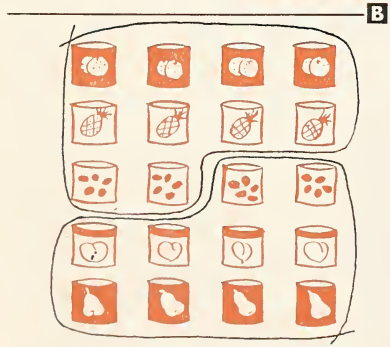
Moving forward

You will now learn how to multiply to make 20, 21, 24, and 25.

A



B



The grocer put a new kind of breakfast food on a shelf. He had 4 groups of boxes. There were 5 boxes in each group. How many boxes of breakfast food did he put on the shelf?

4 fives = ▒

5 multiplied by 4 = ▒

Multiply 5 by 4. 4 times 5 = ▒

4 × 5 = ▒

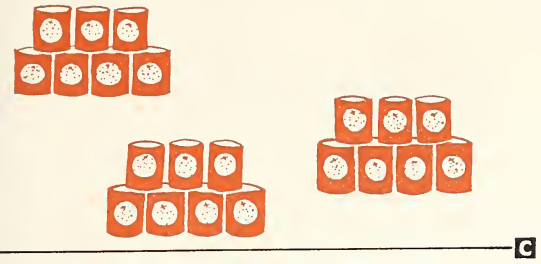
The grocer had five different kinds of fruit in cans. He had 4 cans of each kind. How many cans of fruit did he have in all?

5 fours = ▒

4 multiplied by 5 = ▒

Multiply 4 by 5. 5 times 4 = ▒

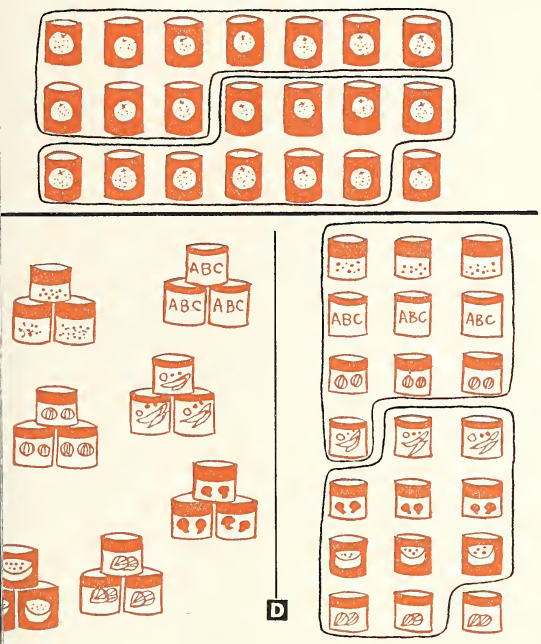
5 × 4 = ▒



C

The grocer put some cans of fruit juice into 3 groups on a shelf in the store. There were 7 cans of fruit juice in each group. How many cans of fruit juice were there in all?

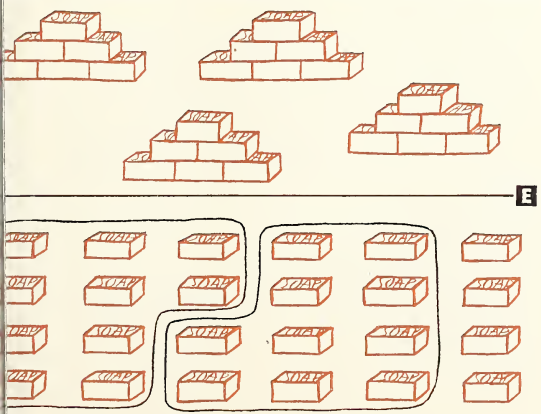
3 sevens = ▒
7 multiplied by 3 = ▒
Multiply 7 by 3. 3 times 7 = ▒
3 × 7 = ▒



D

There were 7 different kinds of soup in the store. There were 3 cans of each kind of soup. How many cans of soup were there in all?

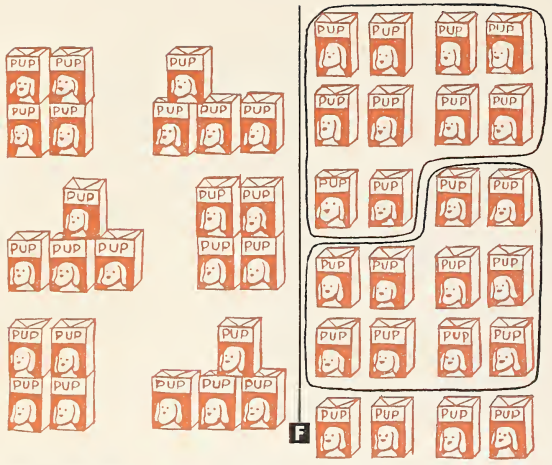
7 threes = ▒
3 multiplied by 7 = ▒
Multiply 3 by 7. 7 times 3 = ▒
7 × 3 = ▒



E

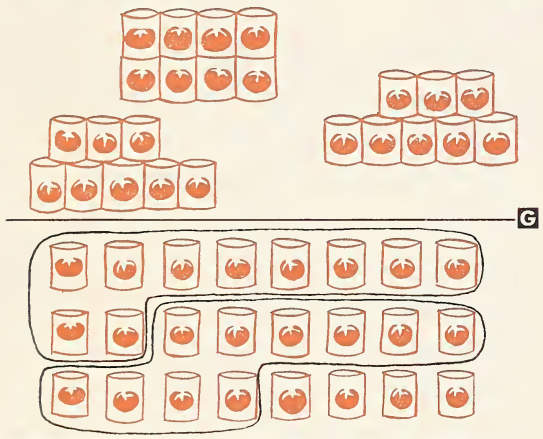
The grocer had some cakes of soap. He put them in four piles. He put 6 cakes of soap in each pile. He had how many cakes of soap in all?

4 sixes = ▒
6 multiplied by 4 = ▒
Multiply 6 by 4. 4 times 6 = ▒
4 × 6 = ▒



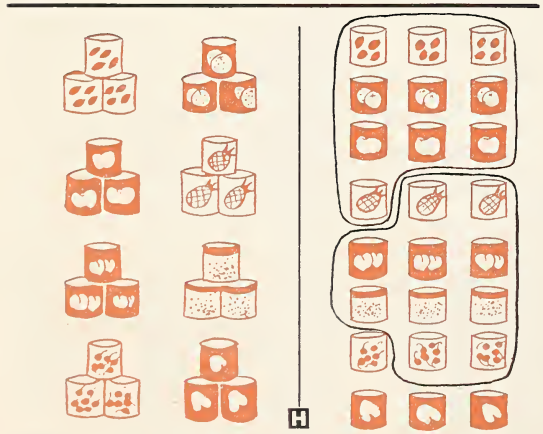
A grocer is putting some boxes of dog food into 6 bags. He is putting 4 boxes into each bag. How many boxes of dog food in all is he putting into the bags?

6 fours = ▒
4 multiplied by 6 = ▒
Multiply 4 by 6. 6 times 4 = ▒
6 × 4 = ▒



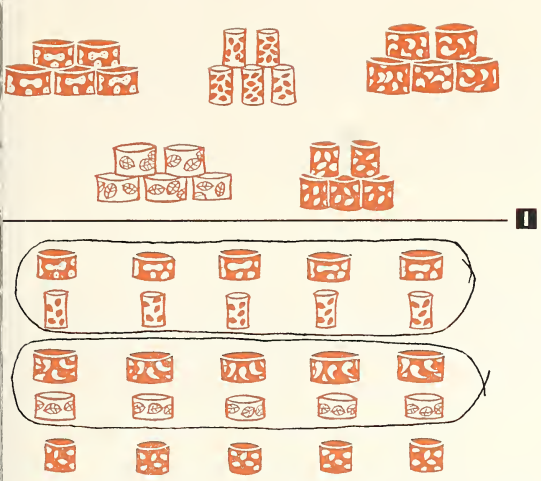
Some cans of tomato juice were in 3 piles on a shelf. There were 8 cans of tomato juice in each pile. How many cans of tomato juice were on the shelf?

3 eights = ▒
8 multiplied by 3 = ▒
Multiply 8 by 3. 3 times 8 = ▒
3 × 8 = ▒



The grocer had 8 different kinds of fruit juice. He had 3 cans of each kind. He had how many cans of fruit juice in all?

8 threes = ▒
3 multiplied by 8 = ▒
Multiply 3 by 8. 8 times 3 = ▒
8 × 3 = ▒



There were 5 different kinds of nuts in cans on the shelf. There were 5 cans of each kind. How many cans of nuts were there in all?

5 fives = ▒
5 multiplied by 5 = ▒
Multiply 5 by 5. 5 times 5 = ▒
5 × 5 = ▒

A 3 × 8 = ▒
B 5 × 4 = ▒
C 7 × 3 = ▒
D 4 × 6 = ▒
E 5 × 5 = ▒
F 8 × 3 = ▒
G 4 × 5 = ▒
H 6 × 4 = ▒
I 3 × 7 = ▒

A 6 times 4 = ▒
B 3 times 8 = ▒
C Multiply 5 by 5.
D 5 fours = ▒
E Multiply 7 by 3.
F 4 times 5 = ▒
G Multiply 3 by 8.
H 4 sixes = ▒
I 7 threes = ▒

J Multiply 6 by 4.
K 5 times 4 = ▒
L 5 fives = ▒
M Multiply 3 by 8.
N 3 times 8 = ▒
O 4 fives = ▒
P 3 sevens = ▒
Q Multiply 4 by 6.
R 7 times 3 = ▒

Now you should know how to multiply to make 20, 21, 24, and 25.

Keeping skillful

A 9 × 2 = ▒
B 3 × 6 = ▒
C 2 × 7 = ▒
D 18 ÷ 6 = ▒
E 14 ÷ 2 = ▒
F 15 ÷ 5 = ▒

A 218 − 109 = ▒
B $4.87 + $.23 = ▒
C 36 + ▒ = 87
D 55 + ▒ = 80
E 485 + 213 = ▒
F 26 + ▒ = 77

G 142 − 88 = ▒
H $6.23 − $4.98 = ▒
I 746 − 588 = ▒
J $3.75 − $.67 = ▒
K 547 + ▒ = 659
L 402 + 281 = ▒

Moving forward

You will now learn how to divide 20, 21, 24, and 25 into equal groups.

The grocer is going to put 20 cakes of soap into bags. He will put 5 cakes of soap into each bag. How many bags will he need for the soap?

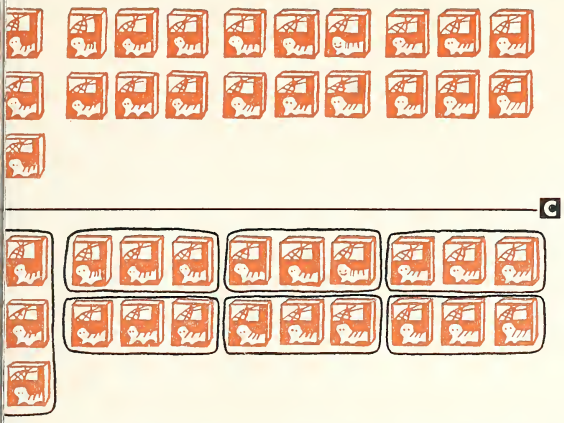
A

20 divided by 5 = ▒
Divide 20 by 5. 20 ÷ 5 = ▒

The grocer wants to put 20 cans of orange juice into boxes. He will put 4 cans into each box. How many boxes will he need for the cans of orange juice?

B

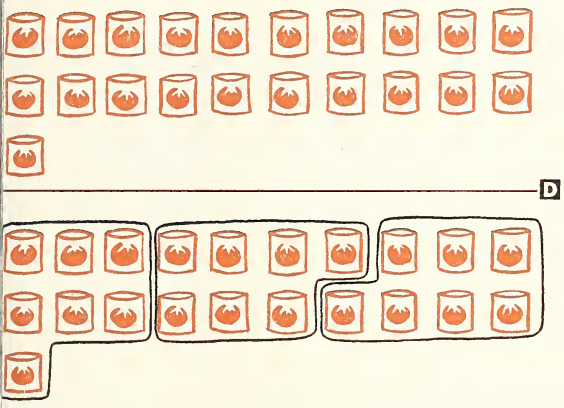
20 divided by 4 = ▒
Divide 20 by 4. 20 ÷ 4 = ▒



C

The grocer sold 21 boxes of breakfast food. He sold 3 boxes of breakfast food to each child in the store. How many children were in the store?

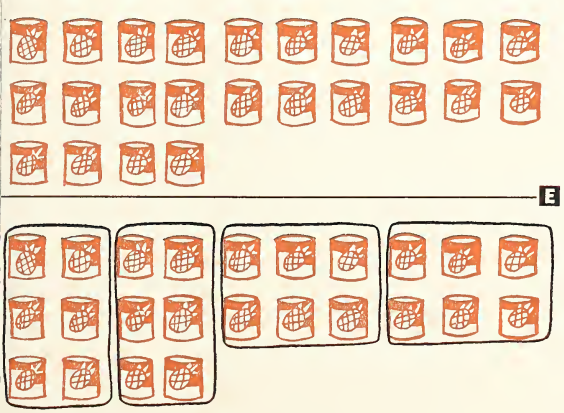
21 divided by 3 = ▒
Divide 21 by 3. $21 \div 3 =$ ▒



D

The grocer is going to put 21 cans of soup into boxes. He will put 7 cans into each box. How many boxes does he need?

21 divided by 7 = ▒
Divide 21 by 7. $21 \div 7 =$ ▒



E

The grocer is going to put 24 cans of fruit into groups. He will put 6 cans of fruit into each group. How many groups will he have?

24 divided by 6 = ▒
Divide 24 by 6. $24 \div 6 =$ ▒

F

The grocer put 24 cans of nuts into bags. He put 4 cans into each bag. How many bags did he use?

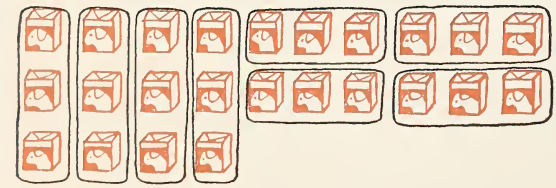
24 divided by 4 = ▒
Divide 24 by 4. $24 \div 4 = \square$

G

The grocer will put 24 cans of fruit juice into bags. He will put 8 cans into each bag. How many bags will he use for the fruit juice?

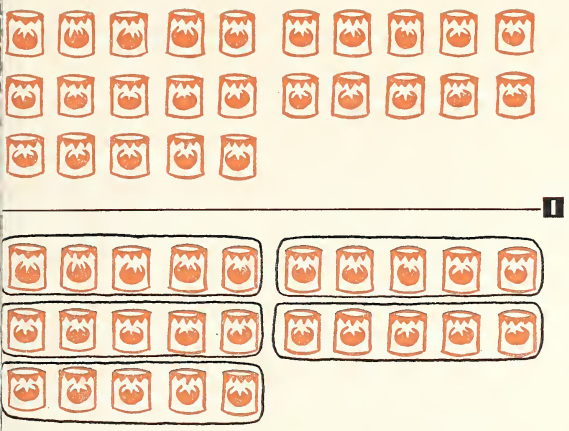
24 divided by 8 = ▒
Divide 24 by 8. $24 \div 8 = \square$

H



The grocer put 24 boxes of dog food into groups. He put 3 boxes into each group. How many groups did he have?

24 divided by 3 = ▒
Divide 24 by 3. $24 \div 3 = \square$



The grocer is going to put 25 cans of tomato juice into boxes. He will put 5 cans into each box. How many boxes does he need?

25 divided by 5 = ▒
Divide 25 by 5. 25 ÷ 5 = ▒

A 24 ÷ 8 = ▒
B 20 ÷ 5 = ▒
C 21 ÷ 3 = ▒
D 24 ÷ 6 = ▒
E 20 ÷ 4 = ▒
F 24 ÷ 3 = ▒
G 21 ÷ 7 = ▒
H 25 ÷ 5 = ▒
I 24 ÷ 4 = ▒

A Divide 21 by 3.
B 25 divided by 5 = ▒
C 20 divided by 4 = ▒
D Divide 24 by 8.
E 24 divided by 6 = ▒
F 21 divided by 7 = ▒
G Divide 25 by 5.
H Divide 24 by 4.
I Divide 20 by 5.

J 24 divided by 8 = ▒
K Divide 20 by 4.
L 24 divided by 3 = ▒
M Divide 21 by 7.
N 20 divided by 5 = ▒
O Divide 24 by 6.
P Divide 24 by 3.
Q 21 divided by 3 = ▒
R 24 divided by 4 = ▒

Now you should know how to divide 20, 21, 24, and 25 into equal groups.

Keeping skillful

A 5 × 2 = ▒
B 12 ÷ 6 = ▒
C 25 ÷ 5 = ▒
D 3 × 5 = ▒
E 6 × 3 = ▒
F 5 × 4 = ▒
G 14 ÷ 2 = ▒

H 24 ÷ 8 = ▒
I 4 × 3 = ▒
J 3 × 8 = ▒
K 21 ÷ 7 = ▒
L 4 × 4 = ▒
M 20 ÷ 5 = ▒
N 2 × 9 = ▒

A 24 ÷ ▒ = 6
B 18 ÷ ▒ = 9
C 16 ÷ ▒ = 4
D 21 ÷ ▒ = 3
E 20 ÷ ▒ = 5
F 15 ÷ ▒ = 3
G 25 ÷ ▒ = 5

A 47 + 39 = ▒
B 321 + 482 = ▒
C 87 + ▒ = 159
D 563 − 284 = ▒
E 67 − 42 = ▒
F 98 + 57 = ▒
G 821 + ▒ = 900

Checking up

Test 1	Test 2	Test 3	Test 4
A $4 \times 5 =$ ▒	A $20 \div 4 =$ ▒	A $24 \div$ ▒ $= 6$	A $4 \times 5 =$ ▒
B $6 \times 4 =$ ▒	B $24 \div 6 =$ ▒	B $21 \div$ ▒ $= 3$	B $24 \div 8 =$ ▒
C $3 \times 7 =$ ▒	C $21 \div 7 =$ ▒	C $24 \div$ ▒ $= 4$	C $21 \div$ ▒ $= 7$
D $8 \times 3 =$ ▒	D $20 \div 5 =$ ▒	D $20 \div$ ▒ $= 5$	D $8 \times 3 =$ ▒
E $5 \times 5 =$ ▒	E $24 \div 8 =$ ▒	E $24 \div$ ▒ $= 8$	E $20 \div$ ▒ $= 4$
F $7 \times 3 =$ ▒	F $21 \div 3 =$ ▒	F $20 \div$ ▒ $= 4$	F $4 \times 6 =$ ▒
G $5 \times 4 =$ ▒	G $24 \div 3 =$ ▒	G $21 \div$ ▒ $= 7$	G $24 \div$ ▒ $= 6$
H $3 \times 8 =$ ▒	H $25 \div 5 =$ ▒	H $24 \div$ ▒ $= 3$	H $7 \times 3 =$ ▒
I $4 \times 6 =$ ▒	I $24 \div 4 =$ ▒	I $25 \div$ ▒ $= 5$	I $21 \div 3 =$ ▒

Side trip

A	1	first	A	20	twentieth	A	37
B	2	second	B	21	twenty-first	B	104
C	3	third	C	22	twenty-second	C	99
D	4	fourth	D	30	thirtieth	D	234
E	5	fifth	E	31	thirty-first	E	395
F	6	sixth	F	40	fortieth	F	62
G	7	seventh	G	43	forty-third	G	181
H	8	eighth	H	70	seventieth	H	46
I	9	ninth	I	79	seventy-ninth	I	53
J	10	tenth	J	100	one hundredth	J	170
K	11	eleventh	K	101	one hundred first	K	201
L	12	twelfth	L	111	one hundred eleventh	L	400
M	13	thirteenth	M	121	one hundred twenty-first	M	85
N	14	fourteenth	N	150	one hundred fiftieth	N	38
O	15	fifteenth	O	162	one hundred sixty-second	O	72

End-of-block tests on multiplication and division basic facts for 20, 21, 24, and 25. Ordinals as a system

Checking up

Test 1

A Twelve boys and girls went to a museum. There were 8 boys in the group. How many girls were there?

B The 12 children went to the museum in 3 cars. The same number of children went in each car. How many children went in each car?

C On the way, Dick bought a large candy bar that cost 10¢. Nancy bought a smaller one for 6¢. Dick's candy bar cost how much more than Nancy's?

D Before Bill went to the museum, he had some pennies. Then his father gave him 9 pennies. Bill said, "Now I have 14 pennies." How many pennies did Bill have to begin with?

E Five of the children went to a show at the museum. Each child paid 5¢ for the show. How much did the 5 children pay altogether?

F At the museum the children counted 7 animals in one room and 9 animals in another room. How many animals were there in the two rooms?

G At lunch there was room for 6 children at one table. How many tables did the 12 children need?

H Carol spent 8¢ for milk and 5¢ for an apple at the museum. How much did she spend in all for the milk and the apple?

I There were 18 different kinds of animal pictures in the museum store. 9 kinds were small, and the others were large. How many kinds of pictures were large?

J Ann bought some animal pictures when she came into the museum. She bought 4 more pictures before she left. Then she had 11 pictures. How many pictures did Ann buy when she came in?

K Tom saw an animal book he wanted to buy. It cost 15¢. Tom had 9¢. How much more money did he need to buy the book?

L Jim bought 4 animal pictures at the museum. He paid 6¢ apiece for them. How much did Jim pay in all for the four pictures?

Now turn the page.

M Mary bought 6 animal pictures. Her mother bought some more for her. Then Mary had 10 animal pictures. How many animal pictures did Mary's mother buy for her?

N June had fifteen cents to spend for pictures. They cost 3¢ apiece. How many pictures could she buy?

O Bob saw 16 large shells and 7 small shells on a table. There were how many fewer small shells than large shells on the table?

P Five of the boys bought a book about animals. The book cost 25¢. They shared the cost equally. How much did each boy pay?

Test 2

Add

A 9, 4, 7
B 6, 7, 5, 3
C 4, 8, 6, 9
D 43, 17
E 59, 25
F 29, 17, 83
G 48, 75, 19
H 427, 168
I 220, 630

Test 3

A $67 - 29 = \square$
B $94 - 87 = \square$
C $40 - 14 = \square$
D $80 - 62 = \square$
E $543 - 296 = \square$
F $911 - 682 = \square$
G $307 - 258 = \square$
H $502 - 136 = \square$
I $793 - 453 = \square$
J $820 - 760 = \square$

Test 4

A $4 \times 3 = \square$
B $9 \times 2 = \square$
C $3 \times 3 = \square$
D $5 \times 2 = \square$
E $3 \times 6 = \square$
F $5 \times 4 = \square$
G $3 \times 5 = \square$
H $8 \times 2 = \square$
I $6 \times 4 = \square$
J $2 \times 7 = \square$

Test 5

A $10 \div 5 = \square$
B $24 \div 6 = \square$
C $14 \div 7 = \square$
D $16 \div 4 = \square$
E $12 \div 6 = \square$
F $15 \div 3 = \square$
G $18 \div 6 = \square$
H $8 \div 4 = \square$
I $12 \div 3 = \square$
J $18 \div 3 = \square$

Test 6

A $10 \div \square = 2$
B $4 \times 4 = \square$
C $9 + 7 = \square$
D $16 \div 8 = \square$
E $\square + 8 = 15$
F $14 - 9 = \square$
G $9 + \square = 13$
H $18 \div \square = 9$
I $\square + 6 = 11$
J $5 \times 2 = \square$
K $17 - 8 = \square$

Test 7

A $\$.82 + \$.78 = \square$
B $\$1.97 + \$2.46 = \square$
C $\$.92 - \$.78 = \square$
D $\$.13 + \$.89 = \square$
E $\$3.40 - \$3.06 = \square$
F $\$6.50 - \$4.73 = \square$
G $\$2.05 + \$.60 = \square$
H $\$5.14 - \$.66 = \square$
I $\$1.42 + \$7.58 = \square$
J $\$4.01 - \$3.80 = \square$
K $\$.96 + \$4.88 = \square$

Test 8

A $28 + \square = 54$
B $168 - 159 = \square$
C $85 + 62 = \square$
D $402 - 86 = \square$
E $\square + 54 = 76$
F $42 + \square = 100$
G $67 + 104 = \square$
H $\square + 13 = 81$
I $73 - 58 = \square$
J $15 + \square = 55$
K $177 - 78 = \square$

Moving forward

In this lesson you will learn something new about dividing numbers.

A At the museum a man put 16 butterflies on cards. He put 5 on each card. How many cards did he need? Did he have any butterflies left over?

The 1 butterfly left over is the remainder.

$16 \div 5 = 3$ and 1 remainder

B If the man had put 3 butterflies on each card, how many cards would he have needed? Would he have had any butterflies left over?

$16 \div 3 = 5$ and ▒ remainder

C If he had put 7 butterflies on each card, how many cards would he have needed? Would he have had any butterflies left over?

$16 \div 7 =$ ▒ and ▒ remainder

D If he had put 6 butterflies on each card, how many cards would he have needed? Would he have had any butterflies left over?

$16 \div 6 =$ ▒ and ▒ remainder

Now turn the page.

E If you had 25 butterflies and wanted to put 9 butterflies on each card, how many cards would you need? Would any butterflies be left over?

25 ÷ 9 = ▭ and ▭ remainder

F If you had 21 butterflies and wanted to put 8 butterflies on each card, how many cards would you need? Would any butterflies be left over?

21 ÷ 8 = ▭ and ▭ remainder

A Bird pictures cost 6¢ apiece. Nancy wanted to buy some. She had 20¢. How many of the pictures could she have bought? Would she have had any money left over?

20 ÷ 6 = ▭ and ▭ remainder

B Animal stamps cost 4¢ apiece. Jim had 21¢ to spend for stamps. How many stamps could he have bought? Would he have had any money left over?

21 ÷ 4 = ▭ and ▭ remainder

C Which of these numbers can be divided by 4 without a remainder?

16 10 22 20 24 15 8

D Which of these numbers can be divided by 3 without a remainder?

15 21 11 12 24 18 16

A 15 ÷ 4 = 3 and ▭ remainder
B 25 ÷ 7 = 3 and ▭ remainder
C 16 ÷ 3 = ▭ and ▭ remainder
D 12 ÷ 5 = ▭ and ▭ remainder
E 24 ÷ 5 = ▭ and ▭ remainder
F 20 ÷ 8 = ▭ and ▭ remainder
G 14 ÷ 5 = ▭ and ▭ remainder
H 18 ÷ 4 = ▭ and ▭ remainder
I 15 ÷ 7 = ▭ and ▭ remainder
J 9 ÷ 4 = ▭ and ▭ remainder
K 16 ÷ 5 = ▭ and ▭ remainder
L 17 ÷ 8 = ▭ and ▭ remainder
M 18 ÷ 7 = ▭ and ▭ remainder
N 24 ÷ 9 = ▭ and ▭ remainder
O 8 ÷ 3 = ▭ and ▭ remainder
P 20 ÷ 3 = ▭ and ▭ remainder
Q 25 ÷ 4 = ▭ and ▭ remainder
R 15 ÷ 2 = ▭ and ▭ remainder

Sometimes when you divide to find how many equal groups there are, you will have a remainder.

Using arithmetic

A At the circus Bob saw a man selling balloons for 15¢ apiece. Bob had 8¢. How much more money did he need to buy a balloon?

B Don wanted to buy an airplane on a stick that cost $.25. He had $.40. How much money would he have left if he bought an airplane?

C Bob bought a box of candy that had 20 pieces in it. He shared the candy equally with 3 other boys. How many pieces did each of the 4 boys get?

D Bill had fifteen cents. He bought 3 candy bars of the same kind. They cost how many cents apiece?

E Ellen bought a doll that cost $.27, and Betty bought a doll that cost $.58. How much money did the girls pay for the two dolls?

F Nancy spent 25¢. She bought some candy bars that cost 5¢ apiece. How many candy bars did she buy?

G Jim bought 2 boxes of candy bars. There were 4 candy bars in each box. How many candy bars were there in the 2 boxes?

H Jack went to the circus with 50¢ to spend. Ann went with 38¢ to spend. Ann had how much less money to spend at the circus than Jack?

I Jim had some money when he went to the circus. His father gave him 25¢. Then Jim had $1.00. How much money did Jim have to begin with?

J The children saw 12 men riding ponies. They saw them separate into 3 equal groups. How many men riding ponies were in each group?

K A clown said, "I had 242 balloons to sell this morning, and I sold 78." He had how many balloons left?

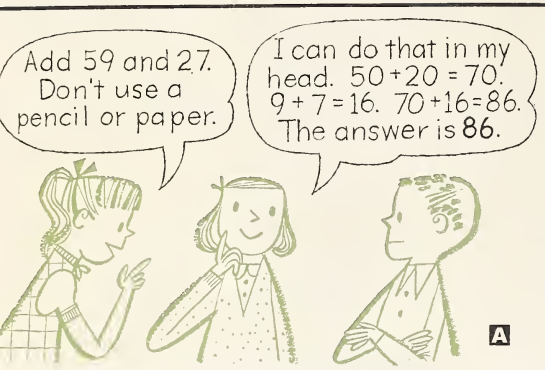
L Some clowns were riding ponies. 8 clowns were riding in the first ring, 2 in the second ring, and 5 in the third ring. How many clowns were riding in the three rings?

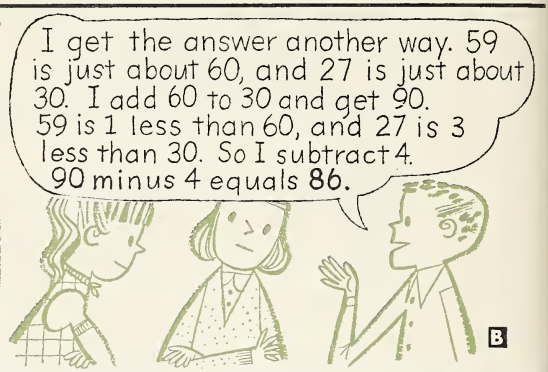
M Ann paid $.15 for a small box of popcorn. Carol paid $.25 for a larger box. Carol paid how much more than Ann for her popcorn?

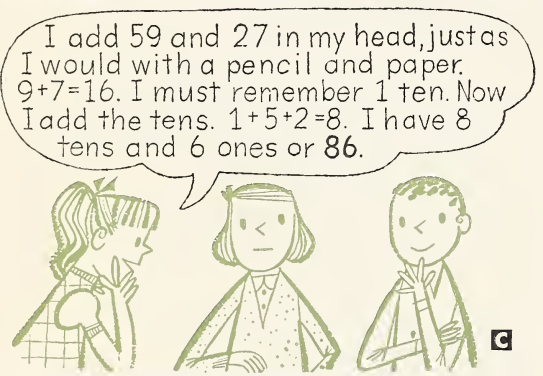
N 2 bears were sleeping in one cage, 3 bears were sleeping in the next cage, and 5 were sleeping in a third cage. How many bears were sleeping in the three cages?

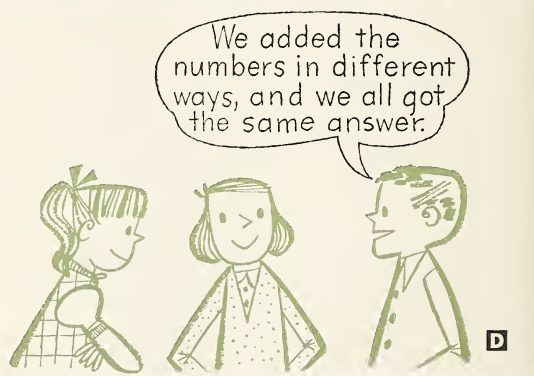
O Don had $1.25 when he went to the circus. He wanted to keep some money to spend the next week. He spent 68¢ at the circus. How much money did he keep for the next week?

Thinking straight




I get the answer another way. 59 is just about 60, and 27 is just about 30. I add 60 to 30 and get 90. 59 is 1 less than 60, and 27 is 3 less than 30. So I subtract 4. 90 minus 4 equals 86.
B


I add 59 and 27 in my head, just as I would with a pencil and paper. 9+7=16. I must remember 1 ten. Now I add the tens. 1+5+2=8. I have 8 tens and 6 ones or 86.
C



A Add 36 to 53 in your head. Use the way shown in Picture A.

B Add 48 to 28 in your head. Use the way shown in Picture B.

C Now use the way shown in Picture C to add 48 to 28.

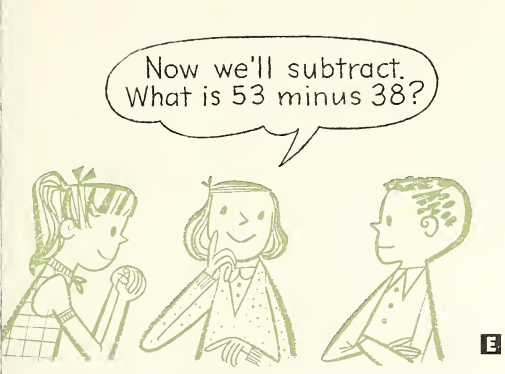
D Add 24 to 25 in your head. How did you do it?

E Add 19 to 19 in your head. How did you do it?

F Use two different ways to add 26 to 14 in your head.

Add in your head.

A	$25+45=$	E	$46+31=$	I	$21+29=$	M	$53+34=$
B	$37+59=$	F	$50+27=$	J	$28+28=$	N	$72+18=$
C	$54+22=$	G	$37+36=$	K	$46+44=$	O	$47+35=$
D	$18+23=$	H	$49+48=$	L	$19+17=$	P	$30+56=$



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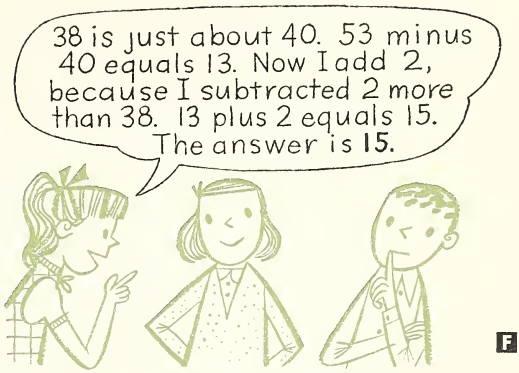

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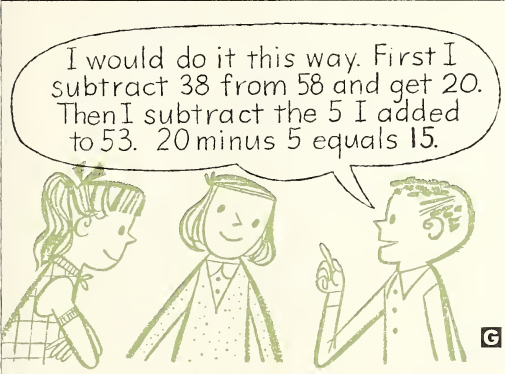
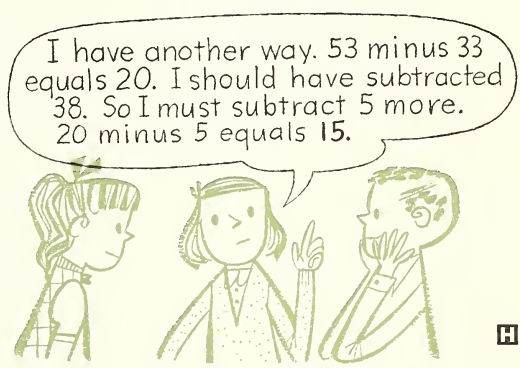


G



H

A Subtract 29 from 61 in your head. Use the way shown in Picture F. 61 − 30 = 31. What must you add to 31? Why?

B Subtract 16 from 40 in your head. Use the way shown in Picture G. 46 − 16 = 30. What must you subtract from 30? Why?

C Now use the way shown in Picture H to subtract 16 from 40. 40 − 10 = 30. What must you subtract from 30? Why?

D Subtract 47 from 63 in your head. How did you do it?

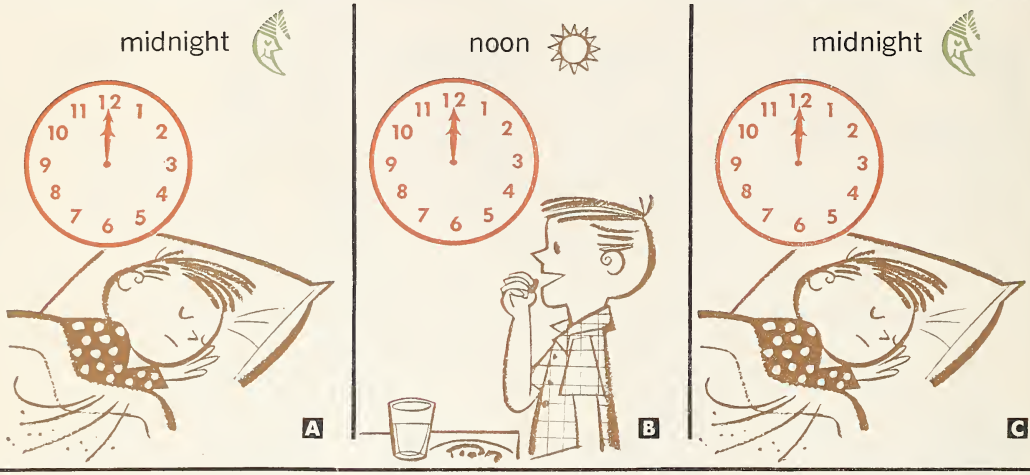
E Subtract 23 from 48 in your head. How did you do it?

Subtract in your head.

A	60 − 32 = ▒	**E**	81 − 19 = ▒	**I**	54 − 37 = ▒	**M**	54 − 39 = ▒
B	40 − 17 = ▒	**F**	77 − 35 = ▒	**J**	72 − 40 = ▒	**N**	44 − 28 = ▒
C	68 − 39 = ▒	**G**	90 − 51 = ▒	**K**	85 − 46 = ▒	**O**	60 − 23 = ▒
D	59 − 30 = ▒	**H**	43 − 27 = ▒	**L**	97 − 62 = ▒	**P**	78 − 41 = ▒

Moving forward

In this lesson you will find out how time is measured.



60 seconds = 1 minute **D**

60 minutes = 1 hour **E**

60 seconds = 1 minute
60 minutes = 1 hour
24 hours = 1 day
7 days = 1 week

52 weeks = 1 year
12 months = 1 year
365 days = 1 year

A Saturday morning Jack worked for 105 minutes. He worked for 1 hour ▒ minutes.

B Yesterday Nancy spent 4 hours on the playground. How many hours did she have left for all the other things she had to do?

C Bill's father worked 242 days last year. How many days did he not work last year?

D There are 5 days in a school week. Ann missed 22 days of school. This is how many school weeks?

E Which months have more than 30 days? Each of these months has how many days?

F Which month has fewer than 30 days? It has how many fewer days?

12 midnight
12 noon

F

12:05 A.M.
Twelve five A.M.
12:05 P.M.
Twelve five P.M.

G

12:35 A.M.
Twelve thirty-five A.M.
12:35 P.M.
Twelve thirty-five P.M.

H

Write with numerals.

A seven ten (morning)
B one thirty (afternoon)
C eight twenty-eight (night)
D three forty-three (afternoon)
E nine sixteen (morning)
F three thirty-one (night)
G eleven eight (morning)
H twelve fifty-seven (night)
I two forty-five (afternoon)
J four twenty (afternoon)
K five thirty-nine (morning)
L ten nineteen (night)

Read.

A 12:58 P.M.
B 1:30 A.M.
C 9:05 A.M.
D 4:50 P.M.
E 5:01 A.M.
F 11:26 P.M.

Now you should be able to read and write time.

Using arithmetic

A Nancy bought 6 tomatoes, and Carol bought 6 tomatoes. The girls bought how many tomatoes? We can say they bought 1 dozen tomatoes because 1 dozen is equal to 12 things.

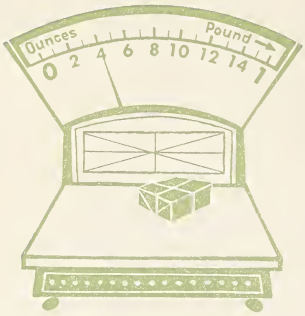
B Mother bought 1 dozen cookies. After school the children ate 7 of them. How many cookies were left?

C Each of four girls bought 4 oranges. Did they buy more than a dozen oranges altogether?

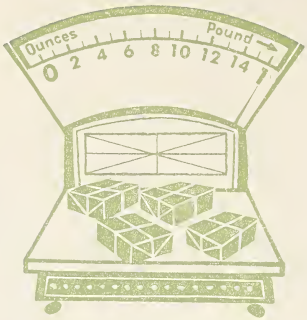
D A grocer sold a dozen boxes of breakfast food in the morning. He sold another dozen boxes in the afternoon. How many boxes of breakfast food did he sell?

E The grocer sold 5 apples to June and 6 apples to Carol. Did he sell more than a dozen or fewer than a dozen apples in all to the two girls?

F Six boys bought a dozen candy bars and shared them equally. How many candy bars did each boy get?



A



16 ounces = 1 pound B

G Mary bought a pound of butter. It was divided into 4 equal pieces. Each piece weighed how many ounces?

H A box weighs 15 ounces. A book weighs 1 pound. Which weighs more, the box or the book?

I Jack weighs 56 pounds, and Jim weighs 61 pounds. Jim weighs how many pounds more than Jack?

J Betty weighed 3 small packages. They weighed 2 ounces, 5 ounces, and 4 ounces. Did they weigh more than or less than 1 pound altogether?

K A clerk weighed 3 bags of tomatoes. They weighed 4 pounds, 6 pounds, and 5 pounds. How much did all 3 bags weigh?

L A package weighed 21 ounces. This package weighed how much more than 1 pound?

M A package weighed 19 ounces. It weighed 1 pound ▒ ounces.

N Bob measured a page in a book. It was 8 inches long. This is how many inches less than a foot?

O Nancy bought 1 gallon of milk, and Mary bought 4 quarts of milk. Did the two girls buy equal amounts of milk? How do you know?

P Don is 46 inches tall, and Nancy is 41 inches tall. Nancy is how many inches shorter than Don?

Q A table is 5 feet wide. It is 1 yard ▒ feet wide.

R A piece of paper was 1 foot wide. June cut it into 4 equal pieces. Each piece was how many inches wide?

S Mother made 8 quarts of tomato juice. This was equal to how many gallons?

Thinking straight

A About how many feet tall are you?

B If you were making a shelf for your books, would you measure in inches or in feet? Why?

C How high would you make the shelf for your books? Why?

D Why are schoolroom doors more than 5 feet high?

E About how long is a big dog?

F About how tall is a big dog?

G How long is a big room?

H How many pounds can you carry?

I About how many feet long do you think your bed is? Why is it that long?

J About how many inches high do you think a table is? Why is it that high?

K A table top is 1 inch more than 7 feet wide and 1 inch more than 7 feet long. Can you take the table top into a room that has a door just 7 feet high? If so, how would you do it?

Keeping skillful

A $385 + 226 =$ ▢
B $\$.92 - \$.64 =$ ▢
C $27 + 32 + 15 =$ ▢
D $471 - 391 =$ ▢
E $48 + 93 + 52 =$ ▢
F $\$7.29 + \$3.16 =$ ▢
G $801 - 464 =$ ▢
H $297 + 194 =$ ▢
I $94 + 18 + 36 =$ ▢
J $\$2.00 - \$1.76 =$ ▢
K $625 - 419 =$ ▢
L $\$.77 + \$.33 =$ ▢
M $836 - 174 =$ ▢
N $\$1.02 - \$.65 =$ ▢
O $87 + 13 + 29 =$ ▢
P $92 + 78 =$ ▢
Q $430 - 364 =$ ▢

A $24 \div 5 =$ ▢ and ▢ remainder
B $18 \div 7 =$ ▢ and ▢ remainder
C $19 \div 9 =$ ▢ and ▢ remainder
D $25 \div 6 =$ ▢ and ▢ remainder
E $20 \div 3 =$ ▢ and ▢ remainder
F $21 \div 4 =$ ▢ and ▢ remainder
G $14 \div 4 =$ ▢ and ▢ remainder
H $16 \div 6 =$ ▢ and ▢ remainder
I $20 \div 8 =$ ▢ and ▢ remainder
J $25 \div 4 =$ ▢ and ▢ remainder
K $21 \div 6 =$ ▢ and ▢ remainder
L $15 \div 6 =$ ▢ and ▢ remainder
M $24 \div 7 =$ ▢ and ▢ remainder
N $20 \div 6 =$ ▢ and ▢ remainder
O $14 \div 6 =$ ▢ and ▢ remainder
P $25 \div 3 =$ ▢ and ▢ remainder
Q $25 \div 7 =$ ▢ and ▢ remainder

A $7 \times 3 =$ ▢
B $20 \div$ ▢ $= 4$
C $24 \div$ ▢ $= 8$
D $6 \times 4 =$ ▢
E $8 \times 3 =$ ▢
F $20 \div 5 =$ ▢
G $4 \times 4 =$ ▢
H $18 \div$ ▢ $= 6$
I $18 \div$ ▢ $= 9$
J $3 \times 6 =$ ▢
K $4 \times 5 =$ ▢
L $21 \div$ ▢ $= 3$
M $5 \times 5 =$ ▢
N $2 \times 2 =$ ▢
O $24 \div$ ▢ $= 6$
P $4 \times 6 =$ ▢
Q $25 \div$ ▢ $= 5$

Using arithmetic

A

B

C

D

A Make a problem for Picture A and find the answer.

B Make a problem for Picture B and find the answer.

C Make a problem for Picture C and find the answer.

D Make two problems for Picture D and find the answers.

E The grocer had some cans of fruit. Then he bought 144 more cans of fruit. Now he has 320 cans of fruit. How many cans of fruit did he have at first?

F A shelf in the store was 6 feet long. The shelf was how many yards long?

G There were 24 apples in a box. The clerk put them into 4 bags. He put an equal number of apples into each bag. How many apples did he put in each bag?

H There were 72 cans of dog food in the store. The clerk sold 46 of them. How many cans of dog food did he have left?

I Don had 28¢ to spend for fruit. He wanted to buy some apples that cost 5¢ apiece. How many apples could he buy? Would he have any money left? How much money would he have left?

J Mother bought 20 quarts of milk one week. This was equal to how many gallons of milk?

K Jack bought 3 oranges. They cost 7¢ apiece. How much did he pay for the oranges?

L The grocer put 24 boxes of breakfast food in 3 piles on a shelf. He put the same number of boxes in each pile. How many boxes did he put in each pile?

M Ann had $2.45. She bought fruit that cost $.95. How much money did she have left?

N There were 4 bags of cookies on a shelf. There were 6 cookies in each bag. How many cookies were in all 4 bags?

O The clerk put 21 carrots in 3 bunches. He put the same number of carrots in each bunch. How many carrots did he put in each bunch?

P Ellen bought 3 bunches of carrots at 8¢ a bunch. How much did she pay for the carrots?

Q Tom bought 2 bunches of carrots. There were 7 carrots in each bunch. How many carrots did he buy?

R The grocer had 13 cans of tomato soup. He bought more tomato soup on Saturday. Then he had 49 cans of tomato soup. How many cans did he buy on Saturday?

Keeping skillful

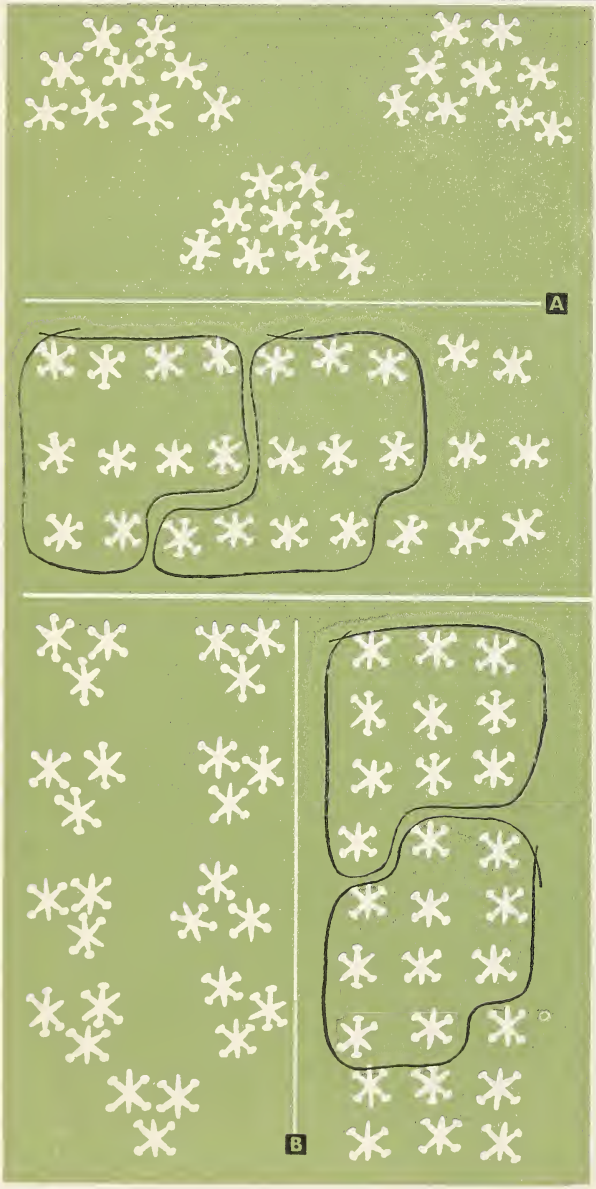
A 9 feet = ▒ yards
B 21 days = ▒ weeks
C 6 quarts = ▒ pints
D 8 yards = ▒ feet
E 16 pints = ▒ gallons
F 16 quarts = ▒ gallons
G 3 gallons = ▒ quarts
H 1 year = ▒ months
I 2 weeks = ▒ days
J 3 gallons = ▒ pints
K 18 feet = ▒ yards
L 20 quarts = ▒ gallons
M 6 gallons = ▒ quarts
N 1 pound = ▒ ounces

A $2.45 − $.86 = ▒
B $.98 + $.63 + $.27 = ▒
C $4.13 + $2.88 = ▒
D $7.03 − $6.49 = ▒
E $.43 − $.17 = ▒
F $.56 + $1.35 = ▒
G $.46 + $.92 + $.25 = ▒
H $1.17 − $.38 = ▒
I $5.30 + $1.90 = ▒
J $7.53 − $5.50 = ▒
K $.29 + $.52 + $.77 = ▒
L $8.21 − $4.89 = ▒
M $1.80 + 62¢ + 9¢ = ▒
N $5.60 − $3.91 = ▒

A 3 × 8 = ▒
B 4 × 5 = ▒
C 24 ÷ 8 = ▒
D 25 ÷ 5 = ▒
E 3 × 6 = ▒
F 14 ÷ ▒ = 2
G 3 × 7 = ▒
H 20 ÷ 4 = ▒
I 3 × 5 = ▒
J 24 ÷ ▒ = 4
K 7 × 3 = ▒
L 5 × 4 = ▒
M 3 × 3 = ▒
N 15 ÷ 5 = ▒

Moving forward

You will now learn how to multiply to make 27, 28, 30, 32, 35, and 36.



3 girls are going to play jacks. Each girl has 9 jacks. The girls have how many jacks in all?

3 nines = ▒

9 multiplied by 3 = ▒

Multiply 9 by 3. 3 times 9 = ▒

$3 \times 9 =$ ▒

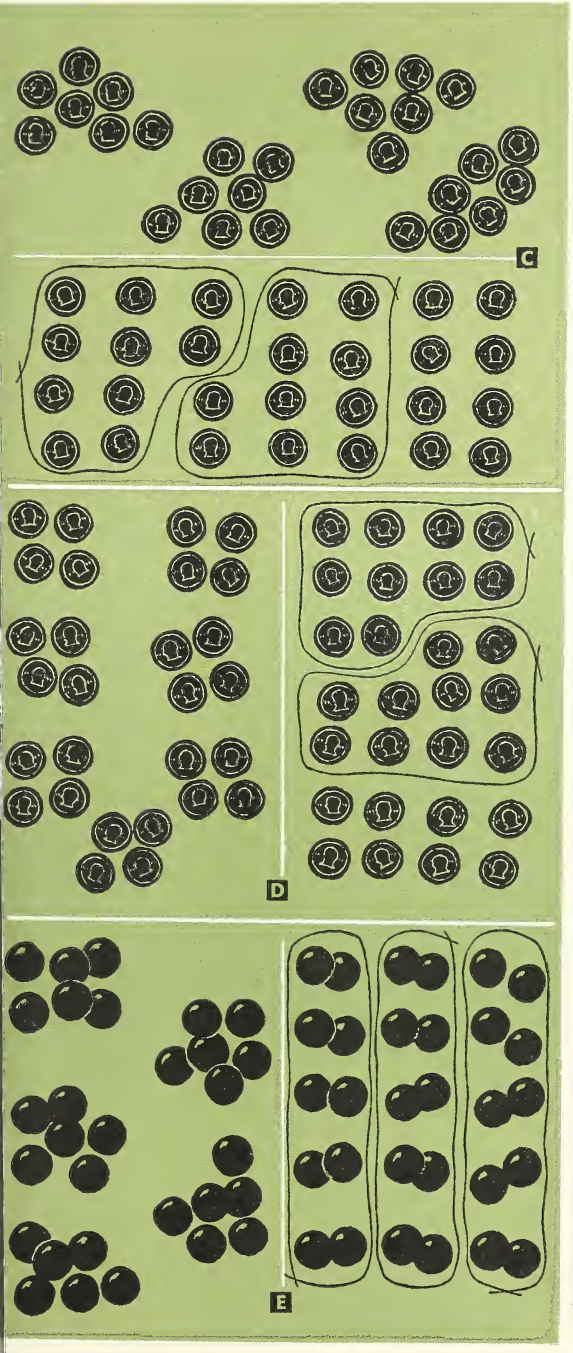
9 girls are going to play jacks. Each girl has 3 jacks. The girls have how many jacks in all?

9 threes = ▒

3 multiplied by 9 = ▒

Multiply 3 by 9. 9 times 3 = ▒

$9 \times 3 =$ ▒



Jim saved 7 cents a day for 4 days.
How much money did he save in all?

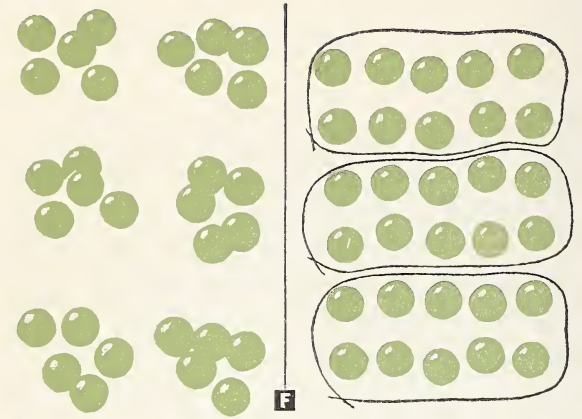
4 sevens = ▒
7 multiplied by 4 = ▒
Multiply 7 by 4. 4 times 7 = ▒
4 × 7 = ▒

Bill saved 4 cents each day for 7 days.
How much money did he save in all?

7 fours = ▒
4 multiplied by 7 = ▒
Multiply 4 by 7. 7 times 4 = ▒
7 × 4 = ▒

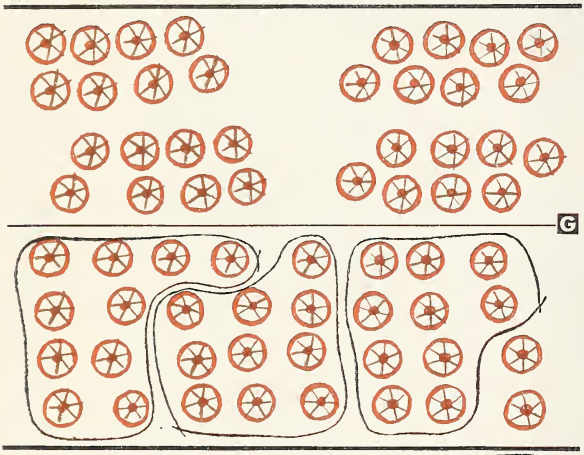
5 boys were going to play marbles.
Each boy had 6 marbles.
How many marbles did the boys have in all?

5 sixes = ▒
6 multiplied by 5 = ▒
Multiply 6 by 5. 5 times 6 = ▒
5 × 6 = ▒



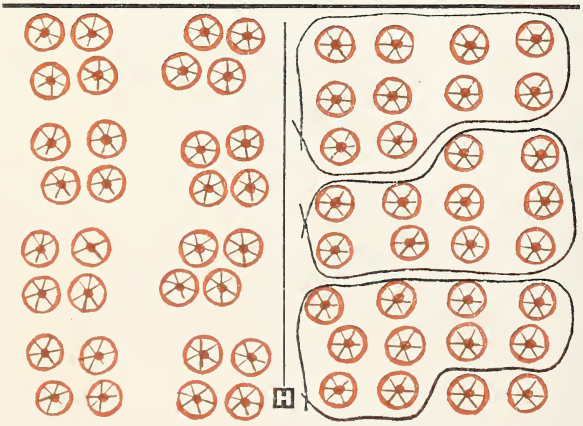
6 boys were going to play marbles. Each boy had 5 marbles. How many marbles did the boys have in all?

6 fives = ▒
5 multiplied by 6 = ▒
Multiply 5 by 6. 6 times 5 = ▒
6 × 5 = ▒



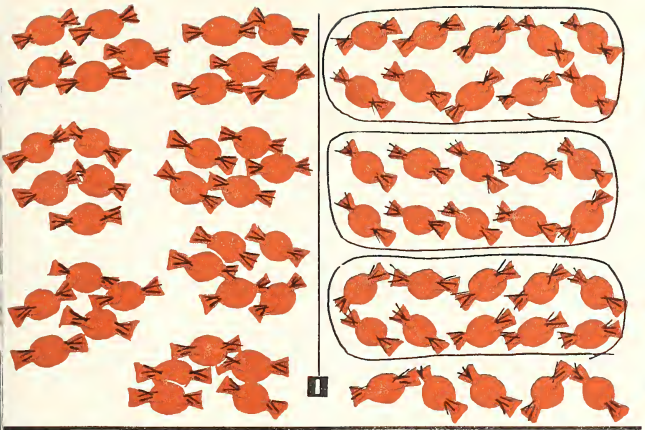
The boys are going to make 4 toys. They need 8 wheels for each toy. How many wheels do they need in all?

4 eights = ▒
8 multiplied by 4 = ▒
Multiply 8 by 4. 4 times 8 = ▒
4 × 8 = ▒



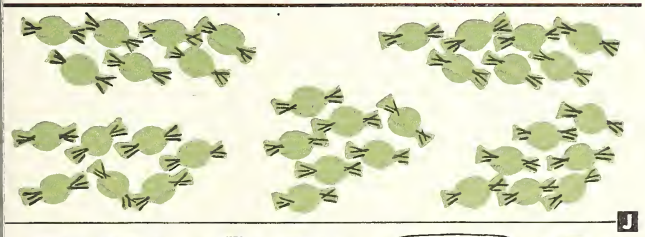
The boys are going to make 8 toys. They need 4 wheels for each toy. How many wheels do they need in all?

8 fours = ▒
4 multiplied by 8 = ▒
Multiply 4 by 8. 8 times 4 = ▒
8 × 4 = ▒



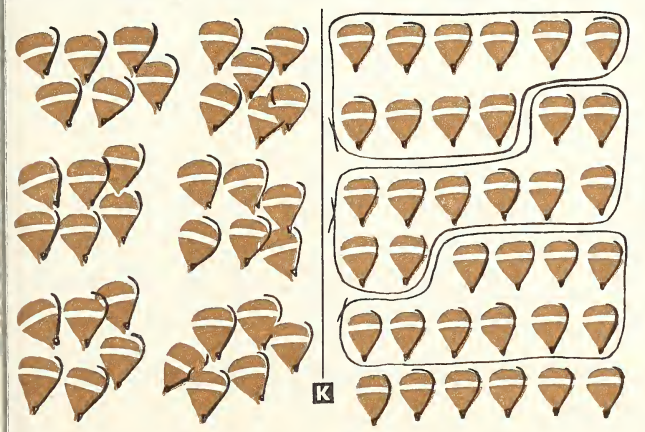
Mother had some candy. She gave 5 pieces to each of 7 children. How many pieces of candy did she give to the children?

7 fives = ▒
5 multiplied by 7 = ▒
Multiply 5 by 7.
7 times 5 = ▒
7 × 5 = ▒



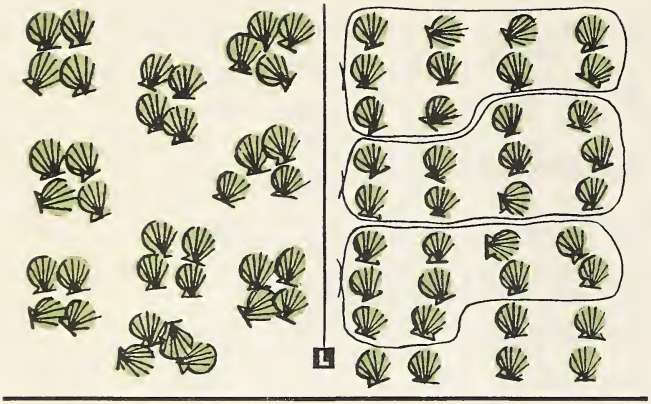
Father had some candy. He gave 7 pieces to each of 5 children. How many pieces of candy did he give to the children?

5 sevens = ▒
7 multiplied by 5 = ▒
Multiply 7 by 5.
5 times 7 = ▒
5 × 7 = ▒



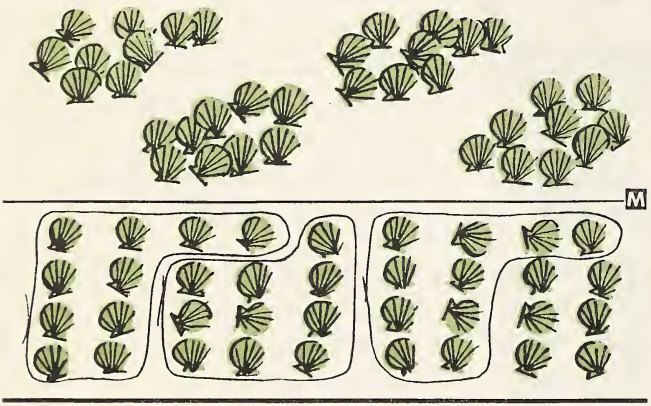
The man in the store had some tops. He sold 6 tops to each of 6 boys. How many tops did he sell in all?

6 sixes = ▒
6 multiplied by 6 = ▒
Multiply 6 by 6.
6 times 6 = ▒
6 × 6 = ▒



Carol saved little shells.
She saved 4 shells each day for 9 days. How many shells did she save in the 9 days?

9 fours = ▒
4 multiplied by 9 = ▒
Multiply 4 by 9.
9 times 4 = ▒
9 × 4 = ▒



June saved shells, also.
She saved 9 shells each day for 4 days. How many shells did she save in the 4 days?

4 nines = ▒
9 multiplied by 4 = ▒
Multiply 9 by 4.
4 times 9 = ▒
4 × 9 = ▒

A 6 × 6 = ▒
B 4 × 7 = ▒
C 9 × 3 = ▒
D 5 × 6 = ▒
E 4 × 8 = ▒
F 7 × 5 = ▒
G 9 × 4 = ▒
H 6 × 5 = ▒
I 3 × 9 = ▒
J 5 × 7 = ▒

K 8 × 4 = ▒
L 4 × 9 = ▒
M 7 × 4 = ▒

A 6 × 6 = ▒
B 4 × 9 = ▒
C 5 × 7 = ▒
D 8 × 4 = ▒
E 5 × 6 = ▒
F 9 × 4 = ▒

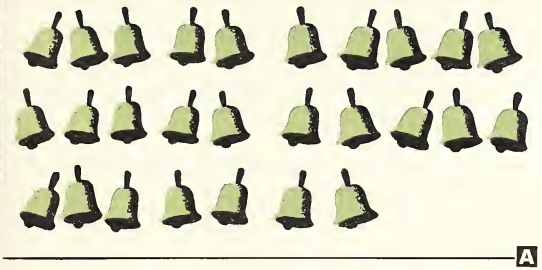
G 4 × 7 = ▒
H 2 × 8 = ▒
I 5 × 5 = ▒
J 5 × 3 = ▒
K 3 × 8 = ▒
L 6 × 5 = ▒
M 7 × 4 = ▒
N 8 × 3 = ▒
O 2 × 7 = ▒
P 4 × 9 = ▒

Q 7 × 3 = ▒
R 5 × 4 = ▒
S 6 × 3 = ▒
T 4 × 8 = ▒
U 6 × 4 = ▒
V 3 × 9 = ▒
W 3 × 7 = ▒
X 9 × 3 = ▒
Y 7 × 5 = ▒
Z 8 × 3 = ▒

Now you should be able to multiply to make 27, 28, 30, 32, 35, and 36.

Moving forward

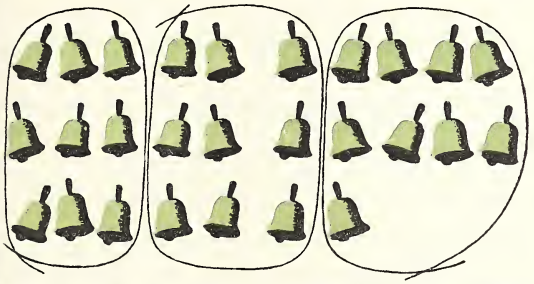
Now you will learn how to divide 27, 28, 30, 32, 35, and 36 into equal groups.

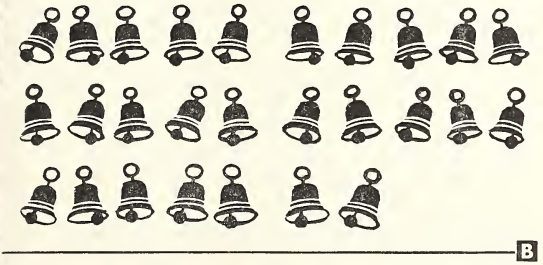


A

There are 27 bells in the store.
The clerk wants to put them into boxes.
He wants to put 9 bells into each box.
How many boxes will he need?

27 divided by 9 = ▒
Divide 27 by 9. $27 \div 9 =$ ▒

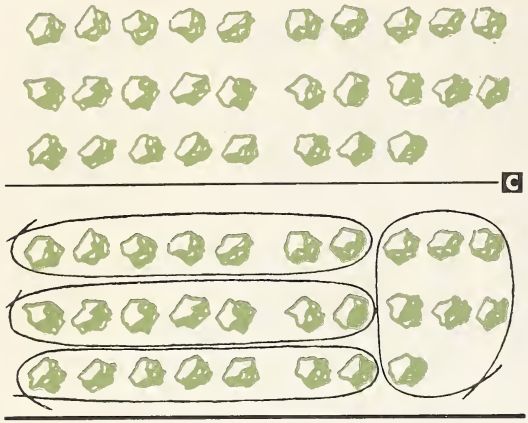




B

There are 27 other bells in the store.
The clerk is going to put them into boxes. He is going to put 3 bells into each box. How many boxes will he need?

27 divided by 3 = ▒
Divide 27 by 3. $27 \div 3 =$ ▒



C

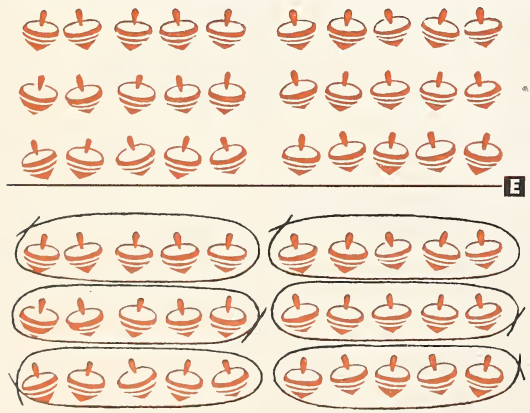
Don separated 28 small stones into groups. He put 7 stones into each group. How many groups of stones did he have?

28 divided by 7 = ▒
Divide 28 by 7. 28 ÷ 7 = ▒

D

Tom put his 28 small stones into groups, also. He put 4 stones into each group. How many groups of stones did he have?

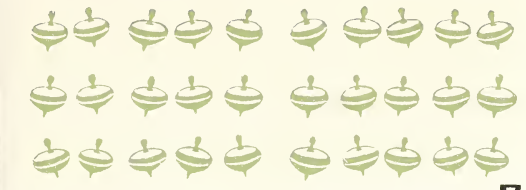
28 divided by 4 = ▒
Divide 28 by 4. 28 ÷ 4 = ▒



E

There are 30 tops in the store. The clerk is going to put them into boxes. He is going to put 5 tops into each box. How many boxes will he need?

30 divided by 5 = ▒
Divide 30 by 5. 30 ÷ 5 = ▒



F

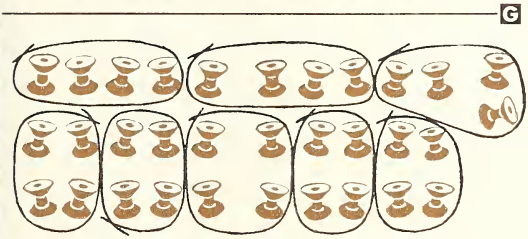
There are 30 tops in the store. The clerk wants to put them into boxes. He wants to put 6 tops into each box. How many boxes will he need?

30 divided by 6 = ▒
Divide 30 by 6. $30 \div 6 = ▒$

G

The boys used 32 spools for some toys that they made. They used 4 spools for each toy. How many toys did they make?

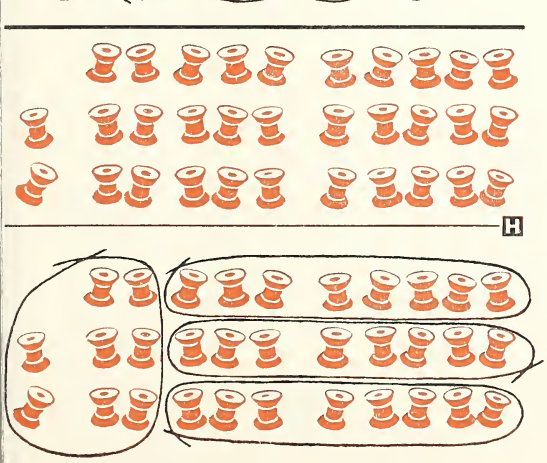
32 divided by 4 = ▒
Divide 32 by 4. $32 \div 4 = ▒$



H

The boys used 32 spools for some other toys that they made. They used 8 spools for each toy. How many of these toys did they make?

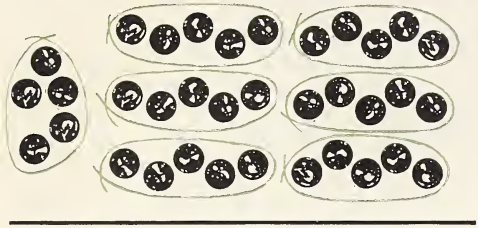
32 divided by 8 = ▒
Divide 32 by 8. $32 \div 8 = ▒$



I

Carol has 35 cents to buy some candy bars. Each candy bar costs 5 cents. How many candy bars can she buy?

35 divided by 5 = ▒
Divide 35 by 5. 35 ÷ 5 = ▒



J

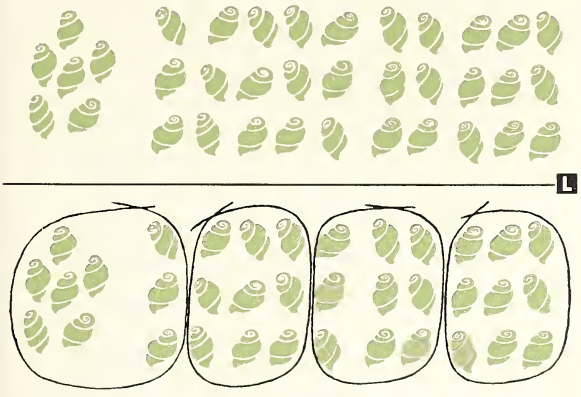
Jack has 35 cents, also. He is going to buy a different kind of candy bar. Each candy bar costs 7 cents. How many candy bars can he buy?

35 divided by 7 = ▒
Divide 35 by 7. 35 ÷ 7 = ▒

K

Don is going to put 36 marbles into bags. He is going to put 6 marbles into each bag. How many bags will he need for the marbles?

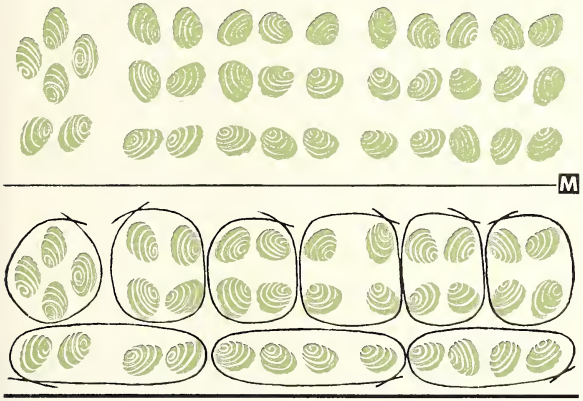
36 divided by 6 = ▒
Divide 36 by 6. 36 ÷ 6 = ▒



L

Betty is going to put 36 shells into boxes. She is going to put 9 shells into each box. How many boxes will she need for the shells?

36 divided by 9 = ▒
Divide 36 by 9. 36 ÷ 9 = ▒



M

Ellen has 36 shells, also. She is going to put her shells into boxes. She is going to put 4 shells into each box. How many boxes will she need?

36 divided by 4 = ▒
Divide 36 by 4. 36 ÷ 4 = ▒

L

A 35 ÷ 5 = ▒
B 27 ÷ 9 = ▒
C 30 ÷ 6 = ▒
D 36 ÷ 4 = ▒
E 28 ÷ 7 = ▒
F 32 ÷ 4 = ▒
G 27 ÷ 3 = ▒
H 36 ÷ 6 = ▒
I 32 ÷ 8 = ▒
J 28 ÷ 4 = ▒

K 35 ÷ 7 = ▒
L 30 ÷ 5 = ▒
M 36 ÷ 9 = ▒

M

A 28 ÷ 4 = ▒
B 32 ÷ 8 = ▒
C 27 ÷ 9 = ▒
D 35 ÷ 5 = ▒
E 30 ÷ 6 = ▒
F 36 ÷ 4 = ▒

G 16 ÷ 4 = ▒
H 27 ÷ 3 = ▒
I 21 ÷ 7 = ▒
J 25 ÷ 5 = ▒
K 18 ÷ 2 = ▒
L 35 ÷ 7 = ▒
M 24 ÷ 4 = ▒
N 36 ÷ 6 = ▒
O 20 ÷ 4 = ▒
P 30 ÷ 5 = ▒

Q 24 ÷ 6 = ▒
R 28 ÷ 7 = ▒
S 20 ÷ 5 = ▒
T 18 ÷ 6 = ▒
U 24 ÷ 8 = ▒
V 32 ÷ 4 = ▒
W 21 ÷ 3 = ▒
X 24 ÷ 3 = ▒
Y 36 ÷ 9 = ▒
Z 25 ÷ 5 = ▒

Now you should know how to divide 27, 28, 30, 32, 35, and 36 into equal groups.

Checking up

Test 1	Test 2	Test 3	Test 4
A $7 \times 5 = \square$	A $28 \div 7 = \square$	A $28 \div \square = 4$	A $7 \times 5 = \square$
B $9 \times 3 = \square$	B $27 \div 9 = \square$	B $35 \div \square = 5$	B $32 \div 4 = \square$
C $5 \times 6 = \square$	C $30 \div 5 = \square$	C $27 \div \square = 9$	C $30 \div \square = 6$
D $4 \times 8 = \square$	D $35 \div 7 = \square$	D $30 \div \square = 6$	D $6 \times 6 = \square$
E $7 \times 4 = \square$	E $32 \div 4 = \square$	E $36 \div \square = 6$	E $28 \div 7 = \square$
F $6 \times 6 = \square$	F $27 \div 3 = \square$	F $27 \div \square = 3$	F $9 \times 3 = \square$
G $5 \times 7 = \square$	G $36 \div 9 = \square$	G $30 \div \square = 5$	G $32 \div \square = 8$
H $3 \times 9 = \square$	H $30 \div 6 = \square$	H $28 \div \square = 7$	H $8 \times 4 = \square$
I $4 \times 7 = \square$	I $28 \div 4 = \square$	I $36 \div \square = 4$	I $6 \times 5 = \square$
J $4 \times 9 = \square$	J $36 \div 6 = \square$	J $32 \div \square = 4$	J $27 \div \square = 9$
K $6 \times 5 = \square$	K $32 \div 8 = \square$	K $35 \div \square = 7$	K $35 \div 7 = \square$
L $8 \times 4 = \square$	L $36 \div 4 = \square$	L $32 \div \square = 8$	L $9 \times 4 = \square$
M $9 \times 4 = \square$	M $35 \div 5 = \square$	M $36 \div \square = 9$	M $36 \div 4 = \square$

Using arithmetic

A A grocer keeps his store open 6 days a week. How many days is it open in 6 weeks?

B 36 cans of peaches were in one box, and 48 cans of peaches were in another box. How many cans of peaches were in the two boxes?

C After the grocer bought 48 boxes of tomatoes, he had 80 boxes to sell. How many boxes of tomatoes did he have at first?

D Three boys bought 6 apples and shared them equally. How many apples did each boy get?

E Ann had 30¢. How many cupcakes could she buy at 6¢ each?

F Mother bought 18 oranges. She bought how many more than or how many fewer than 1 dozen oranges?

G When Mother got home, she emptied 2 boxes of tomatoes and put them away. There were 8 tomatoes in each box. There were how many tomatoes in all?

H Mother emptied 2 bags of cookies on a plate. There were 12 cookies in one bag and 9 cookies in the other bag. How many cookies did Mother put on the plate?

I Mother keeps some empty boxes for the children to play with. Yesterday she gave 4 boxes each to Ann, Carol, and Don. She gave them how many boxes in all?

J Mother paid 27¢ for 3 bunches of carrots. How much did each bunch of carrots cost her?

K The grocer had fifteen bottles of chocolate milk this morning. After he bought some more, he had 39 bottles. How many bottles of chocolate milk did he buy?

L He sold 14 cans of cat food yesterday and 11 cans today. He sold how many fewer cans today than he did yesterday?

M Ellen went to the store with $5. She spent $4.28 for food. How much money did she have left?

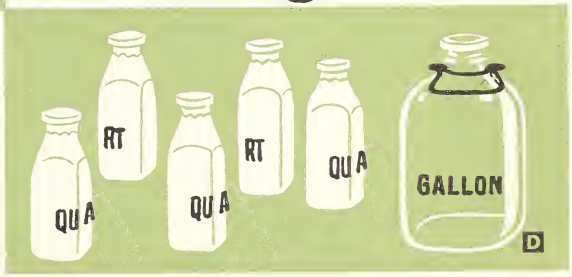
N Dick bought 3 things at the store. One cost $.47, another cost $.96, and the third cost $.28. How much did Dick pay for all 3 things?

O Make a problem for Picture A and find the answer.

P Make 2 problems for Picture B and find the answers.

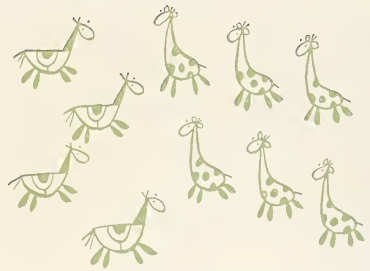
Q Make a problem for Picture C and find the answer.

R Make a problem for Picture D and find the answer.



Moving forward

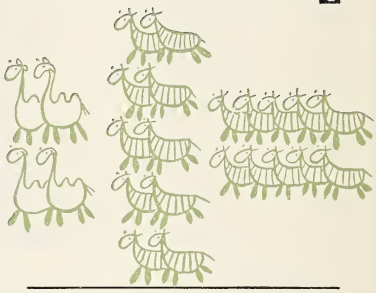
In this lesson you will learn something new about equal groups.

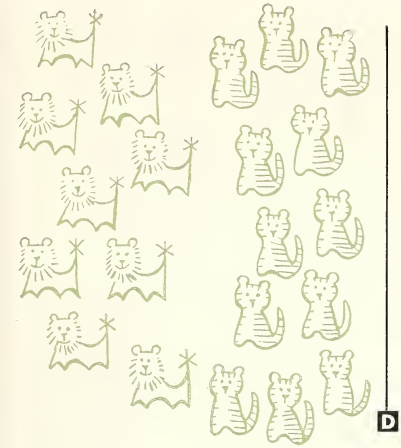


A

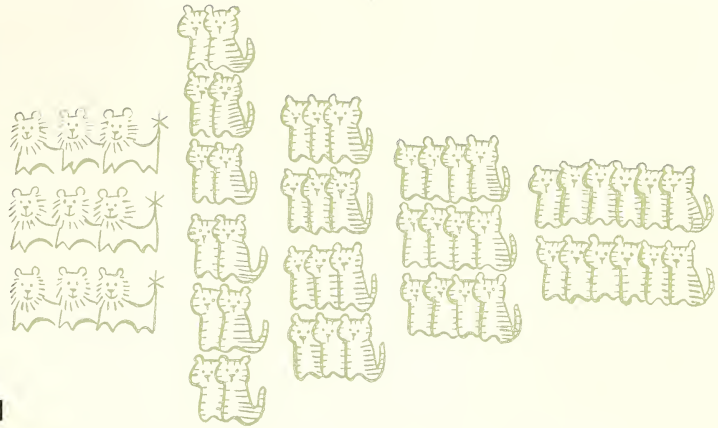
B

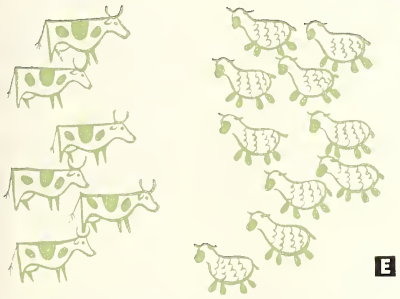
C





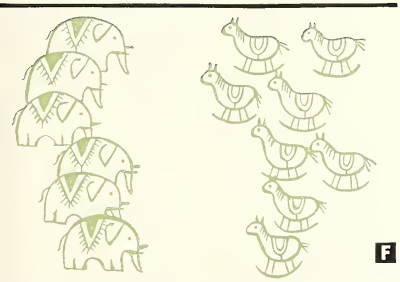
D





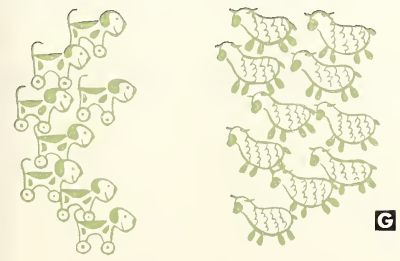
E

A Divide the cows in Picture E into equal groups. Divide the sheep into equal groups. Do you have the same number of equal groups of cows and sheep?
Can you divide both 6 and 10 by 3?
Can you divide both 6 and 10 by 2?



F

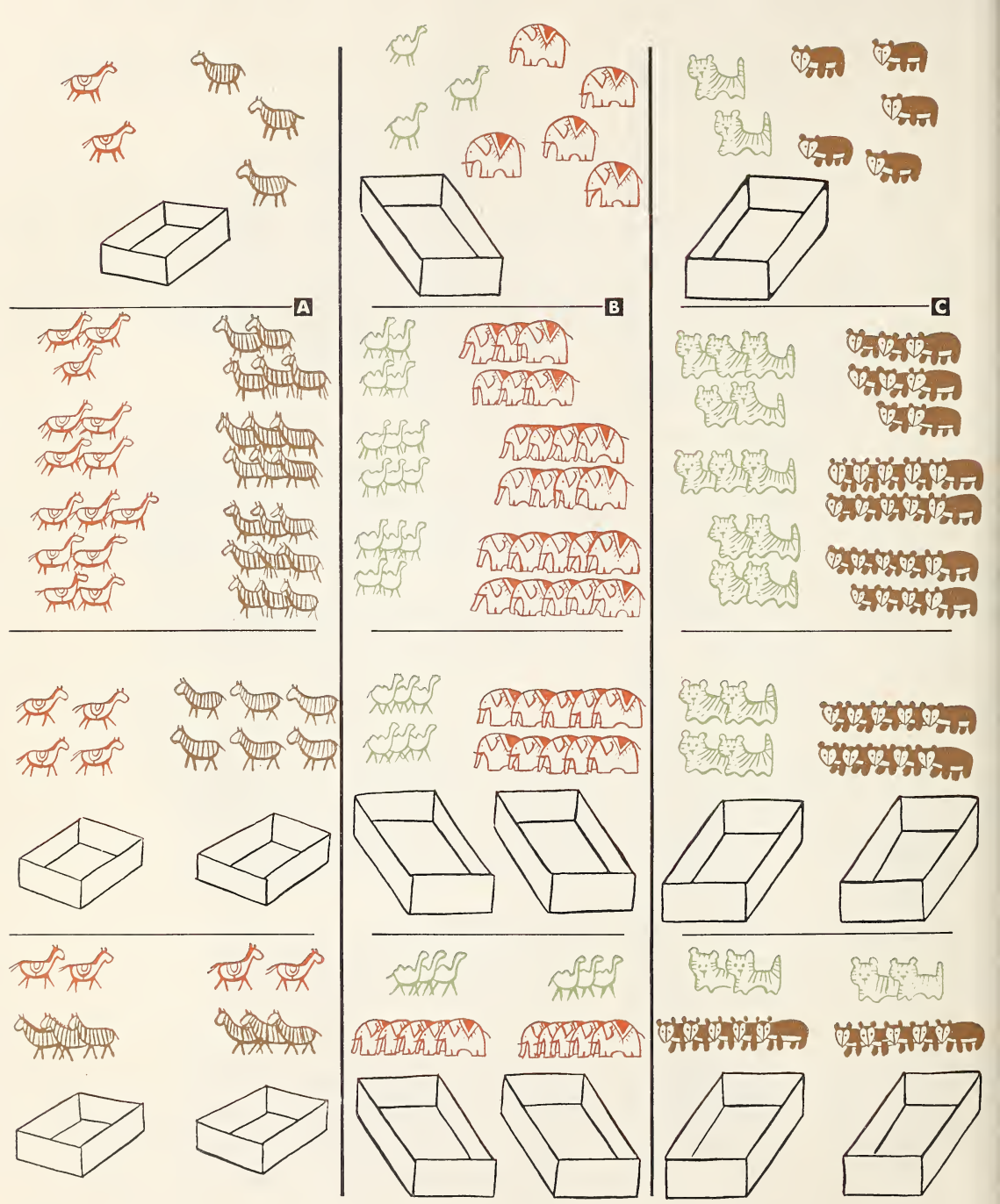
B In Picture F can you divide the elephants and the horses into the same number of equal groups?
How many elephants will be in each group?
How many horses will be in each group?
Can you divide both 6 and 8 by 2?
Can you divide both 6 and 8 by 4?

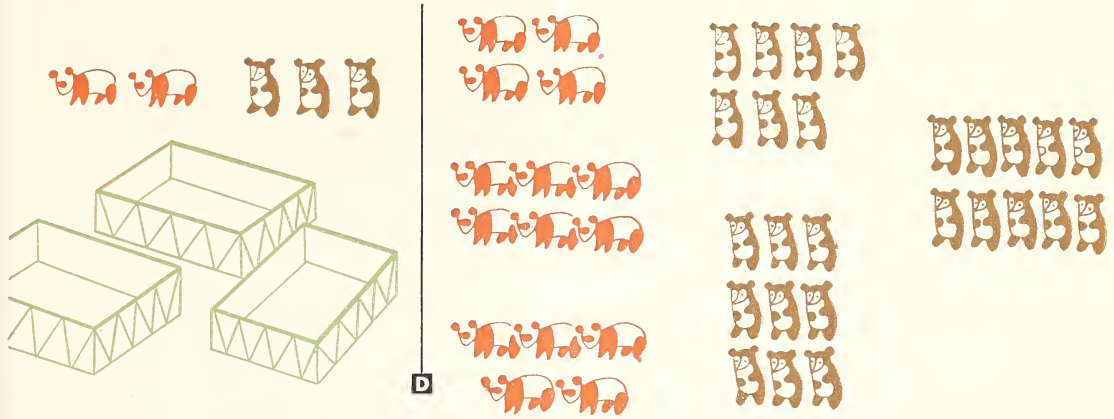


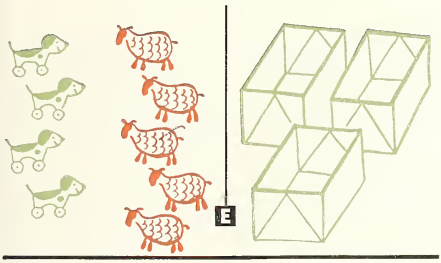
G

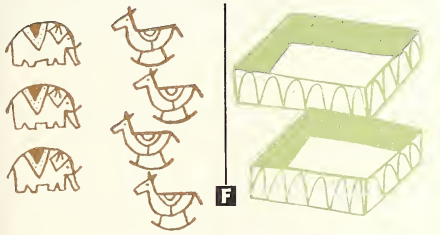
C Look at Picture G.
Can you divide both 8 and 10 by 5?
Can you divide both 8 and 10 by 2?

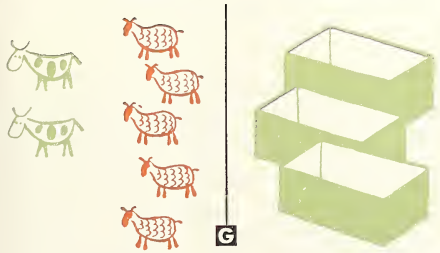
A Can you divide both 8 and 12 by 4?
B Can you divide both 9 and 12 by 3?
C By what number can you divide both 10 and 15?
D By what number can you divide both 6 and 9?
E By what number can you divide both 4 and 10?


A
B
C









A Look at Picture E. For 3 boxes, we need 3 times 4 toy dogs, or ▒ toy dogs. How many toy sheep do we need?

B In Picture F we need 6 elephants for the 2 boxes. How many horses do we need?

C In Picture G we need ▒ cows for the 3 boxes. How many sheep do we need?

D Ann put 2 chicken sandwiches and 3 peanut butter sandwiches into each picnic box. She needed 6 chicken sandwiches for all her boxes. How many boxes did she have? How many peanut butter sandwiches did she need?

E Mary put 5 carrot sticks and 4 cookies into each of her picnic boxes. She needed 10 carrot sticks for all her boxes. How many cookies did she need?

F Betty put 2 chocolates and 3 candy sticks into each bag. She needed 8 chocolates. How many candy sticks did she need?

Sometimes you must find out if each of two numbers can be divided by the same number. Sometimes you must multiply each of two numbers by the same number.

Using arithmetic

A The boys and girls helped to make things for the school fair. One group made 40 popcorn balls, another group made 27 popcorn balls, and a third group made 27 popcorn balls. They made how many popcorn balls?

B Seven boys made a toy zoo to show at the fair. Each boy made 4 animals for the zoo. How many animals were in this zoo?

C One group of children made 24 games to sell at the fair. They put the games into 8 boxes. Each box had the same number of games in it. How many games did the children put into each box?

D Bob saw a game he wanted to buy. It cost 49¢. Bob had 36¢. Bob needed how much more money to buy the game?

E Ann had 72¢ to spend when she went to the fair. First she spent 25¢ for candy. Then how much money did she have to spend?

F Jim had some money to spend at the fair. His father gave him 35¢ more. Then he had $1.25. He had how much money to begin with?

G The children had 128 peanut butter sandwiches to sell. They also had some chicken sandwiches. Altogether they had 213 sandwiches to sell. How many chicken sandwiches did they have?

H Dick had 25 balloons to sell. He wanted to make bunches of 3 balloons. How many bunches could he make? Would any balloons be left over? How many would be left over?

Keeping skillful

Add and check.

A 48, 19, 67
B 293, 185
C 562, 399
D 67, 8, 74
E 902, 78
F 54, 12, 21
G 6, 7, 21, 18

Subtract and check.

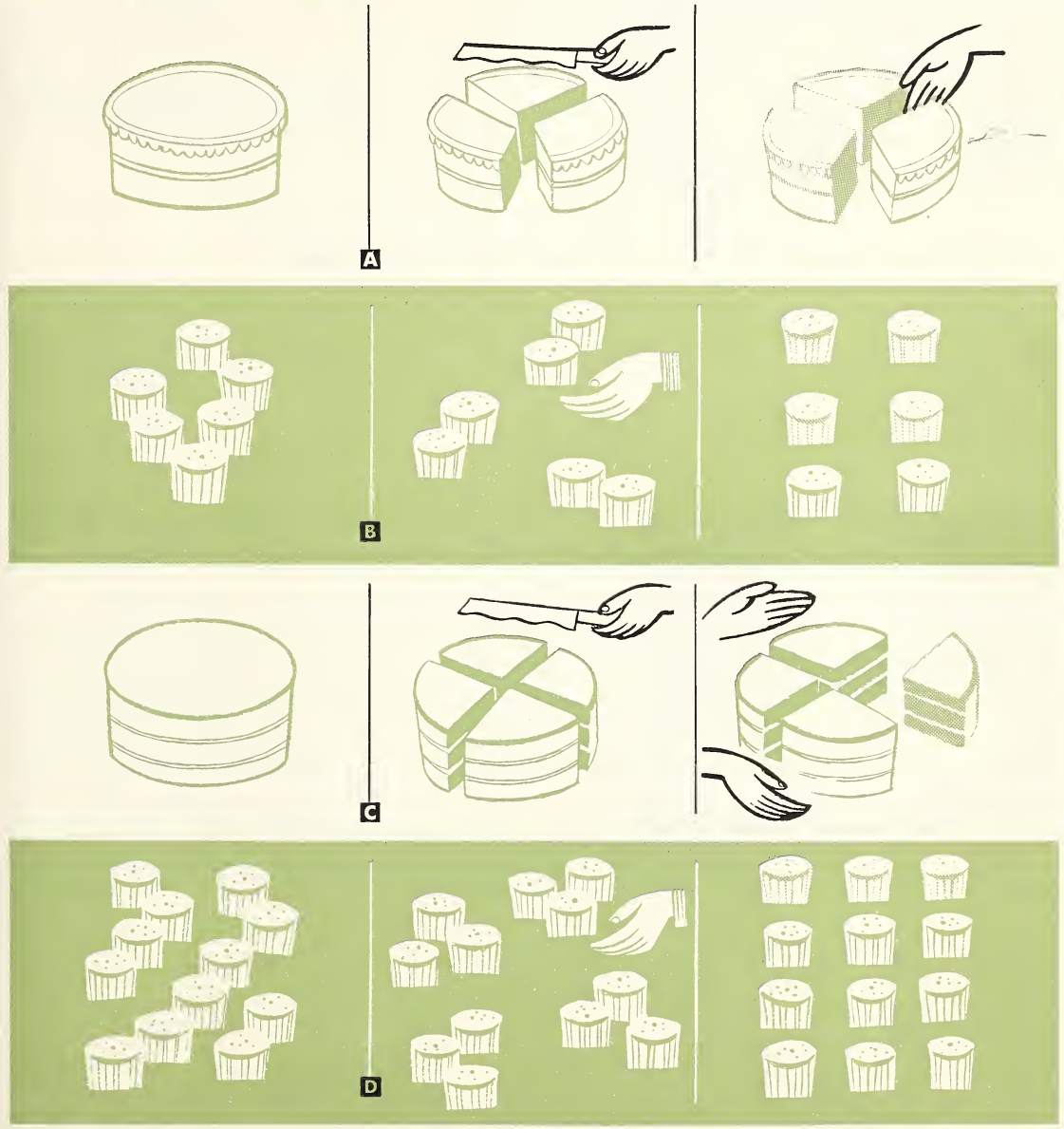
A $705 - 694 =$ ▒
B $342 - 186 =$ ▒
C $573 - 395 =$ ▒
D $120 - 77 =$ ▒
E $62 - 43 =$ ▒
F $806 - 509 =$ ▒
G $942 - 308 =$ ▒

A $6 \times 5 =$ ▒
B $36 \div 4 =$ ▒
C $27 \div 9 =$ ▒
D $5 \times 5 =$ ▒
E $30 \div 5 =$ ▒
F $8 \times 4 =$ ▒
G $24 \div 4 =$ ▒
H $3 \times 6 =$ ▒

I $8 \times 3 =$ ▒
J $35 \div 5 =$ ▒
K $4 \times 9 =$ ▒
L $7 \times 4 =$ ▒
M $32 \div 8 =$ ▒
N $36 \div 6 =$ ▒
O $3 \times 9 =$ ▒
P $16 \div 4 =$ ▒

Moving forward

In this lesson you will learn about a new kind of numeral.



The 3 shows that the cake has been divided into 3 equal parts.

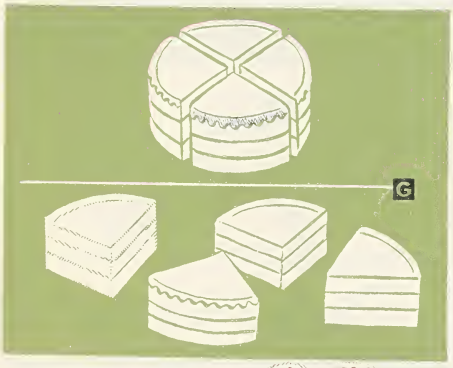
$\frac{1}{3}$ ← The 1 shows we are thinking about 1 of the equal parts.

one third

The 3 shows that the cupcakes have been divided into 3 equal groups.

$\frac{1}{3}$ ← The 1 shows we are thinking about 1 of the equal groups.

one third



The 4 shows that the cake has been divided into 4 equal parts.

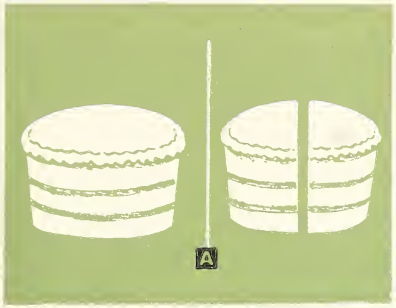
$\frac{3}{4}$ ← The 3 shows we are thinking about 3 of the equal parts.

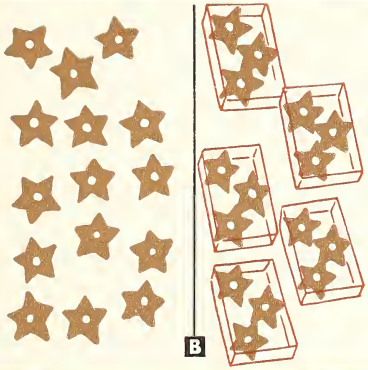
three fourths

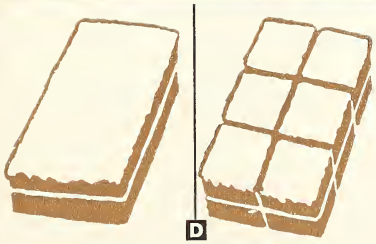
The 4 shows that the cupcakes have been divided into 4 equal groups.

$\frac{3}{4}$ ← The 3 shows we are thinking about 3 of the equal groups.

three fourths







A The white cake in Picture A has been divided into ▒ equal parts.
Each part is one half of the cake.
Each part is $\frac{1}{2}$ of the cake.

B The 15 cookies in Picture B have been divided into ▒ equal groups.

C The 15 cookies are divided into fifths.
Each package of cookies is ▒ fifth, or $\frac{▒}{5}$,
of all the cookies.

D Three packages of cookies are ▒ fifths, or $\frac{3}{5}$,
of all the cookies.

E Four packages of cookies are $\frac{▒}{5}$
of all the cookies.

F The 16 cupcakes in Picture C have been divided into ▒ equal groups.

G The 16 cupcakes are divided into eighths.
Each package of cupcakes is $\frac{▒}{8}$
of all the cupcakes.

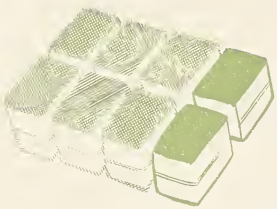
H Four packages of cupcakes are $\frac{▒}{8}$
of all the cupcakes.

I Seven packages of cupcakes are $\frac{▒}{8}$
of all the cupcakes.

J The chocolate cake in Picture D has been divided into ▒ equal parts.

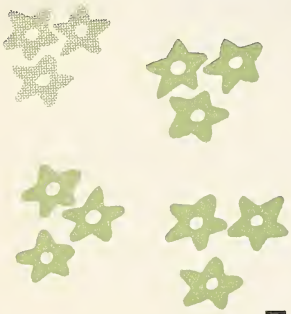
K Each part is $\frac{▒}{6}$ of the cake.

L Five parts are $\frac{▒}{6}$ of the cake.



A

A The cake in Picture A is divided into ▒ equal pieces.
The cake is divided into ~~~.
Jim is going to eat 2 eighths of the cake.
He is going to eat $\frac{▒}{8}$ of the cake.



B

B The cookies in Picture B are divided into ~~~.
Mary is going to buy 3 fourths of them.
She is going to buy $\frac{▒}{4}$ of the cookies.

C The cupcakes in Picture C are divided into ~~~.
Ann is going to buy 4 sixths of them.
She is going to buy $\frac{▒}{6}$ of the cupcakes.

C

D The cake in Picture D is divided into ~~~.
The children are going to eat 7 eighths of it.
They are going to eat $\frac{▒}{8}$ of the cake.

D

Read.

A	B	C	D	E	F	G	H	I	J	K	L	M
$\frac{1}{4}$	$\frac{2}{5}$	$\frac{5}{8}$	$\frac{2}{6}$	$\frac{3}{7}$	$\frac{6}{8}$	$\frac{1}{5}$	$\frac{3}{4}$	$\frac{3}{8}$	$\frac{4}{5}$	$\frac{1}{2}$	$\frac{5}{7}$	$\frac{3}{6}$

Write the numerals.

A	one half	D	three fifths	G	one third
B	two thirds	E	one fourth	H	two sevenths
C	four eighths	F	five sixths	I	two fourths

A Which is more, one half of a cake or one third of the same cake?

B Which is more, one third of a dozen cookies or one fourth of a dozen cookies?

C Which is more, two thirds of a cake or three fourths of the same cake?

You should know what numerals to use for parts of things or parts of groups.

Using arithmetic

A At the playground 2 teams of boys played a baseball game. There were 9 boys on one team and 9 boys on the other team. How many boys played in the baseball game?

B Don had eleven marbles. He gave six of them to Jim so that they could play a game. How many marbles did Don keep?

C Four friends on the playground shared 36 jacks equally. How many jacks did each one get?

D In a basketball game, Jim made 28 points, and Don made 19 points. Jim made how many more points in the game than Don?

E 12 girls divided into equal teams for a game. 4 girls were on each team. How many teams were there?

F Ann saw some birds on the fence. Eight more birds flew to the fence. Then she counted 17 birds on the fence. How many birds were on the fence to begin with?

G June took a book to the playground to read to her little sister. The book had 32 pages in it. June read 15 pages in the morning and the rest in the afternoon. How many pages did she read in the afternoon?

H Three groups of girls were playing jacks. There were 7 girls in each group. How many girls were playing jacks?

I 27 boys were on the playground on one day. The next day 19 boys were there. How many more boys were on the playground on the first day than on the second day?

Thinking straight

Write these so that the smallest one is first, the next to the smallest is second, the third smallest is next, and so on.

A $\frac{3}{8}, \frac{6}{8}, \frac{1}{8}, \frac{5}{8}, \frac{4}{8}, \frac{7}{8}, \frac{2}{8}$

B $\frac{2}{5}, \frac{4}{5}, \frac{1}{5}, \frac{3}{5}$

C $\frac{2}{6}, \frac{4}{6}, \frac{5}{6}, \frac{3}{6}, \frac{1}{6}$

D $\frac{5}{7}, \frac{1}{7}, \frac{4}{7}, \frac{3}{7}, \frac{6}{7}, \frac{2}{7}$

E $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{1}{3}, \frac{1}{7}, \frac{1}{6}, \frac{1}{8}$

F $\frac{3}{5}, \frac{3}{4}, \frac{3}{6}, \frac{3}{7}, \frac{3}{8}$

G $\frac{2}{4}, \frac{2}{6}, \frac{2}{3}, \frac{2}{5}, \frac{2}{8}$

H $\frac{4}{8}, \frac{4}{6}, \frac{4}{7}, \frac{4}{5}$

I $\frac{7}{8}, \frac{5}{6}, \frac{2}{3}, \frac{1}{2}$

J $\frac{1}{3}, \frac{3}{4}, \frac{5}{6}, \frac{1}{5}$

K $\frac{1}{4}, \frac{1}{8}, \frac{7}{8}, \frac{3}{4}$

L $\frac{2}{6}, \frac{4}{6}, \frac{1}{7}, \frac{4}{7}$

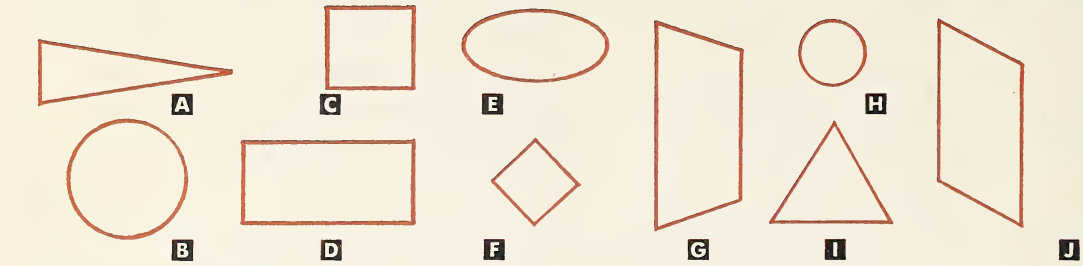
M $\frac{1}{6}, \frac{7}{8}, \frac{2}{3}$

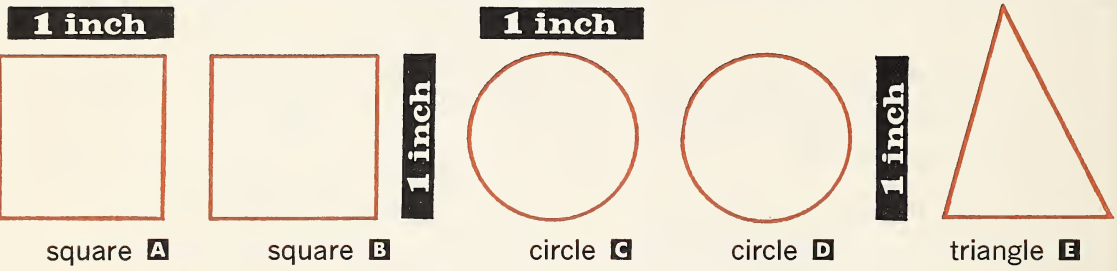
N $\frac{3}{4}, \frac{2}{3}, \frac{1}{5}$

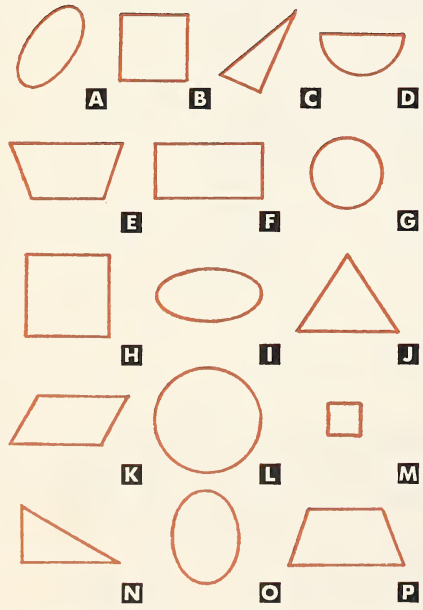
O $\frac{4}{5}, \frac{1}{3}, \frac{1}{2}$

P $\frac{2}{5}, \frac{1}{4}, \frac{5}{8}$

Side trip







A Find each circle in the picture at the left.

B Find each triangle in the picture at the left.

C Find each square in the picture at the left.

D Is this book square?

E Is the top of the table in your schoolroom square?

F Is a square just as wide as it is long?

G Is a triangle just as wide as it is high?

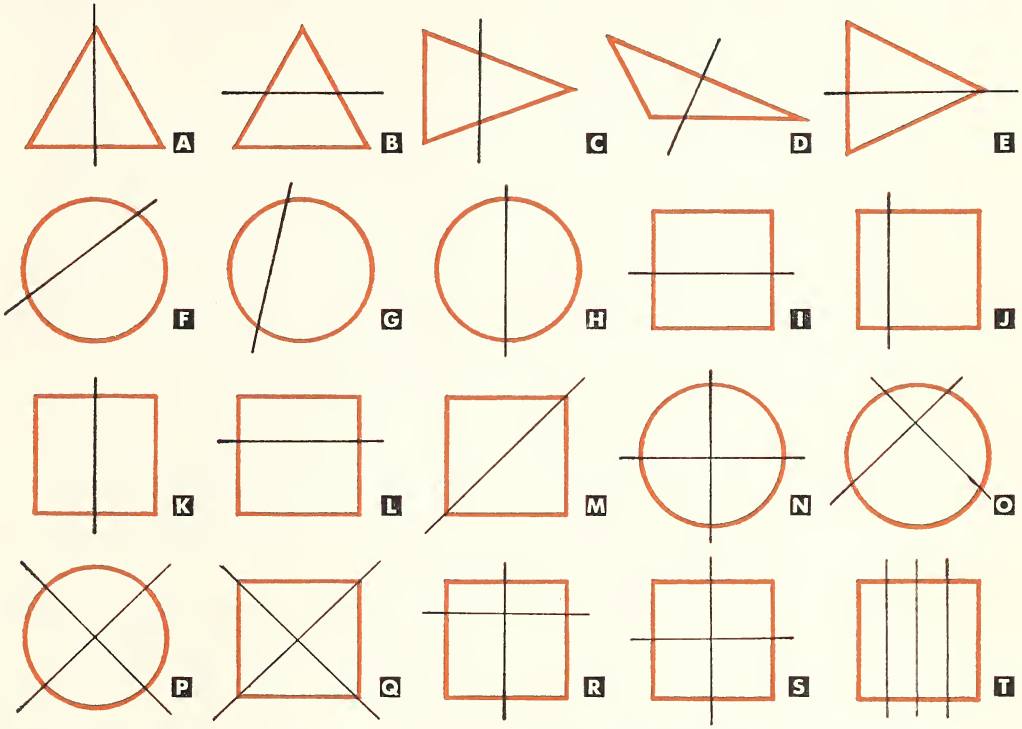
H What things can you think of that are like squares?

I What things are like circles?

J What things are like triangles?

K Why do we not make doors like triangles?

Thinking straight



A Find each circle, triangle, and square that is divided in half.

B Find each circle, triangle, and square that is divided into fourths.

Keeping skillful

Find the sum.

A 32, 16, 54
B 481, 328
C 600, 199
D 63, 49, 72
E 247, 553
F 82, 28, 36
G 6, 9, 8, 5

A $507 - 198 =$ ▒
B $211 - 84 =$ ▒
C $820 - 645 =$ ▒
D $436 - 247 =$ ▒
E $300 - 202 =$ ▒
F $643 - 316 =$ ▒
G $915 - 728 =$ ▒
H $800 - 72 =$ ▒

A $4 \times 3 =$ ▒
B $24 \div 8 =$ ▒
C $36 \div 9 =$ ▒
D $5 \times 6 =$ ▒
E $25 \div 5 =$ ▒
F $6 \times 4 =$ ▒
G $3 \times 7 =$ ▒
H $35 \div 7 =$ ▒

I $27 \div 3 =$ ▒
J $7 \times 5 =$ ▒
K $21 \div 3 =$ ▒
L $4 \times 7 =$ ▒
M $9 \times 4 =$ ▒
N $32 \div 4 =$ ▒
O $28 \div 7 =$ ▒
P $27 \div 9 =$ ▒

Using arithmetic

A Sometimes the boys and girls help in the school library. One day they counted 47 books on one shelf, 64 on another shelf, and 21 on a third shelf. The children counted how many books in all?

B The boys opened two boxes of books. There were 15 books in one box and 22 books in the other box. How many books were in the boxes that the boys opened?

C Ann emptied a box that had 17 new books in it. Ellen emptied a box that had 12 new books in it. The box that Ellen emptied had how many fewer books in it than the box that Ann emptied?

D Ellen put the 12 new library books in equal piles, with 4 books in each pile. How many piles of books did she make?

E Some chairs were at a table. Jim put 5 more chairs at the table. Then there were 12 chairs. How many chairs were at the table at first?

F In the library there were 271 books about different kinds of animals. 68 books were about dogs. How many books were about other kinds of animals?

G Each of 9 boys took 3 books down from a shelf. How many books in all did the boys take down?

H 35 children were in the library for the story hour. More children came in. Then there were 60 children. How many children came in?

I Carol said, "My library book has 126 pages in it. I have read 48 pages." How many pages were left in the book for Carol to read?

J Six boys took out 18 books. Each boy took out the same number of books. Each boy took out how many books?

K Tom, Bob, and Bill took out 2 books each. How many books in all did the boys take out?

L Children took out 248 library books on Monday and 157 on Tuesday. They took out how many more library books on Monday than on Tuesday?

M In the library there were 4 long tables. Eight children were looking at books at each table. How many children were looking at books at the tables?

N Each of 5 boys found 3 books about horses. They found how many books in all about horses?

O The library cards were in two boxes. There were 318 cards in one box and 287 cards in another box. How many library cards were in the two boxes?

P The box with 318 cards had 164 yellow cards. The others were white. How many of these cards were white?

Q On Monday there were 34 new books in the library. Some more were added on Tuesday. Then there were 52 new books in the library. How many new books were added on Tuesday?

R Seven girls took home 21 books about games. Each girl took home the same number of books. How many books did each girl take home?

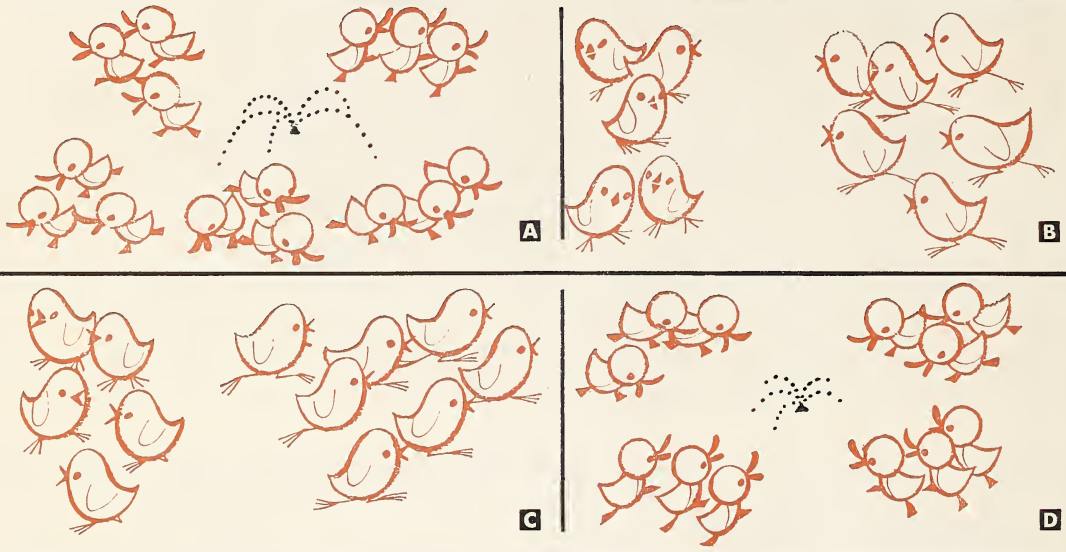
S Carol took 3 books home. One book had 126 pages, another book had 84 pages, and the third book had 140 pages. How many pages in all were in these 3 books?

T The school library is open 5 days a week. How many days is it open in 6 weeks?

Keeping skillful

A $82 + \square = 100$	**A** $801 - 466 = \square$	**A** $4 \times 5 = \square$	**A** $5 \times 6 = \square$
B $75 + 49 = \square$	**B** $123 - 95 = \square$	**B** $32 \div 8 = \square$	**B** $25 \div 5 = \square$
C $\square + 21 = 74$	**C** $526 - 487 = \square$	**C** $24 \div 3 = \square$	**C** $28 \div 7 = \square$
D $236 + 65 = \square$	**D** $320 - 260 = \square$	**D** $7 \times 4 = \square$	**D** $7 \times 3 = \square$
E $98 + 17 = \square$	**E** $715 - 384 = \square$	**E** $3 \times 9 = \square$	**E** $4 \times 6 = \square$
F $175 + \square = 260$	**F** $241 - 192 = \square$	**F** $36 \div 6 = \square$	**F** $36 \div 4 = \square$
G $38 + 41 = \square$	**G** $493 - 267 = \square$	**G** $7 \times 5 = \square$	**G** $27 \div 9 = \square$
H $57 + \square = 73$	**H** $630 - 181 = \square$	**H** $4 \times 8 = \square$	**H** $5 \times 4 = \square$
I $66 + 29 = \square$	**I** $915 - 667 = \square$	**I** $24 \div 4 = \square$	**I** $28 \div 4 = \square$
J $743 + 80 = \square$	**J** $214 - 52 = \square$	**J** $21 \div 3 = \square$	**J** $35 \div 5 = \square$
K $\square + 39 = 161$	**K** $500 - 431 = \square$	**K** $9 \times 4 = \square$	**K** $8 \times 3 = \square$
L $43 + 57 = \square$	**L** $110 - 96 = \square$	**L** $6 \times 6 = \square$	**L** $21 \div 7 = \square$
M $54 + 289 = \square$	**M** $884 - 526 = \square$	**M** $16 \div 4 = \square$	**M** $24 \div 3 = \square$
N $25 + \square = 64$	**N** $421 - 98 = \square$	**N** $7 \times 2 = \square$	**N** $9 \times 2 = \square$
O $77 + 25 = \square$	**O** $300 - 135 = \square$	**O** $32 \div 4 = \square$	**O** $20 \div 5 = \square$
P $430 + 529 = \square$	**P** $937 - 126 = \square$	**P** $2 \times 6 = \square$	**P** $6 \times 4 = \square$
Q $\square + 247 = 400$	**Q** $978 - 43 = \square$	**Q** $5 \times 5 = \square$	**Q** $30 \div 6 = \square$

Looking back



A Which picture shows one group coming together with another group?

B Which picture shows a group separating from a larger group?

C Which picture shows equal groups coming together?

D Which picture shows a group separating into smaller equal groups?

E In which picture would you find the sum?

F With which picture would you use "plus"?

G With which picture would you use "minus"?

H With which picture would you use "divided by"?

I With which picture would you use "multiplied by"?

J With which picture would you use the sign +?

K With which picture would you use the sign ×?

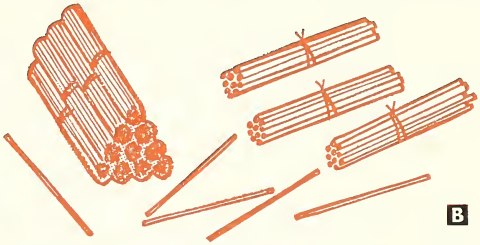
L With which picture would you use the sign ÷?

M With which picture would you use the sign −?

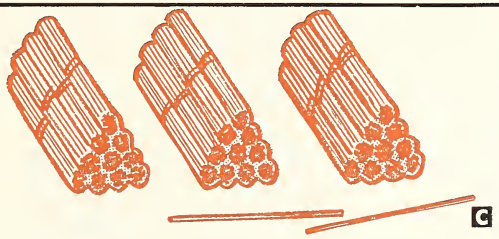
N What other signs have you used in your work this year?

Looking back

A



B



C

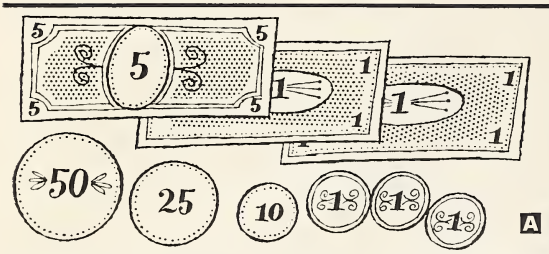
D

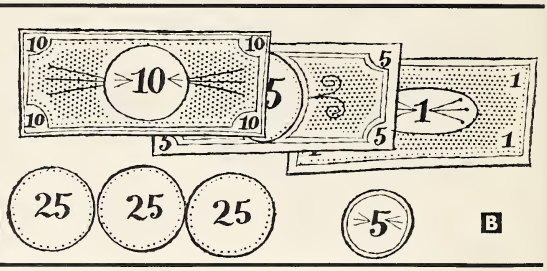
A Which picture shows the number 302?
B Which picture shows the number 135?
C Which picture shows the number 218?
D Which picture shows the number 420?
E In which picture is the numeral 2 in tens' place?
F In which picture is the numeral 2 in ones' place?
G In which picture is the numeral 2 in hundreds' place?
H In the number 7356, what numeral is in thousands' place?

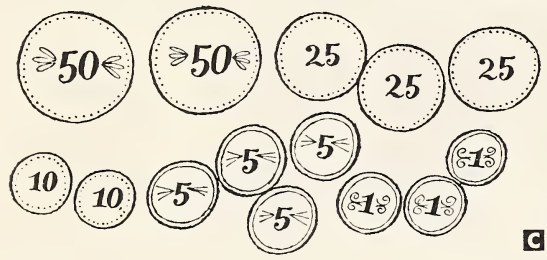
Write with numerals.

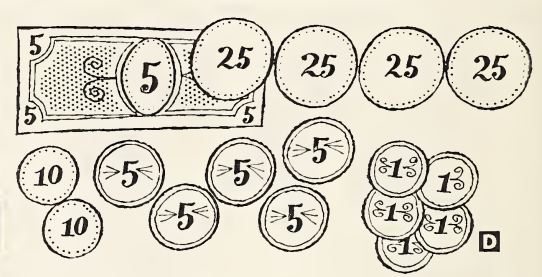
A three thousand five
B one thousand two hundred forty-seven
C two thousand four hundred twenty-one
D nine hundred twenty-eight
E seven thousand nine hundred sixty-five
F seven thousand one hundred twenty
G four thousand two hundred forty
H nine thousand seven hundred eighty
I five thousand seven hundred fifty-four
J five hundred ten
K four hundred thirty-six
L one hundred seventeen
M six thousand eleven
N nine thousand three
O eight hundred twenty-four
P eight thousand fifty
Q one thousand ten
R one hundred ten

Looking back









A What amount of money is shown in Picture A?

B What amount of money is shown in Picture B?

C What amount of money is shown in Picture C?

D What amount of money is shown in Picture D?

A 1 half dollar = 3 dimes ▒ nickels

B 1 dollar = ▒ quarters 5 dimes

C 1 dollar = 1 half dollar ▒ dimes

D 1 quarter = ▒ dimes 5 pennies

E 1 half dollar = ▒ dimes 10 pennies

F 1 dollar = 2 quarters ▒ nickels

G 1 quarter = 3 nickels ▒ pennies

H 1 half dollar = ▒ nickels 10 pennies

For each of these problems, draw the coins that you would use in making change. Under each coin write the number you would say as you make the change.

A June bought a dollhouse for $1.69. She gave the man $2.00.

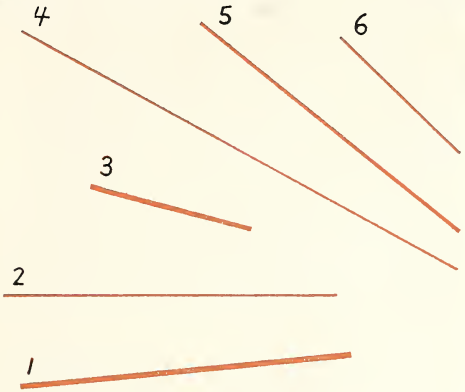
B Jim gave the man a half dollar for some crayons that cost $.27.

C Bill gave the man 2 quarters for a ball that cost 39¢.

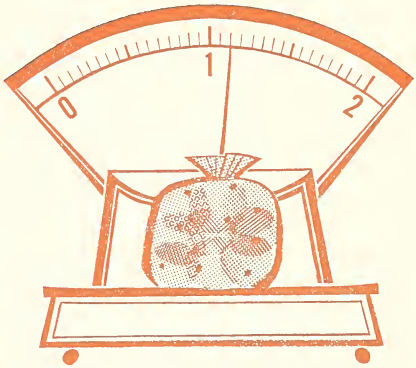
D Ann bought some flowers for $.76. She gave the man 2 half dollars.

E June gave the man $3.00 for a doll bed that cost $2.85.

Looking back



A



B

A How many lines in Picture A are 1 inch long?

B How long is Line 5?

C How long is Line 4?

D How many lines in Picture A are 2 inches long?

E On your paper draw a line that you think is 4 inches long. Measure your line. Is your drawing correct?

F A line is 1 foot 7 inches long. It is how many inches long?

G Does the package in Picture B weigh more than or less than 1 pound?

H The package weighs ▒ ounces.

I A garden fence is 21 inches high. It is ▒ inches more than a foot high.

J Another fence is 1 foot 11 inches high. This fence is ▒ inches high.

K A table is 52 inches long. It is ▒ inches more than 1 yard long.

L Another table is 1 yard 27 inches long. This table is ▒ inches long.

A 1 minute = ▒ seconds

B ▒ inches = 1 foot

C ▒ ounces = 1 pound

D 28 days = ▒ weeks

E ▒ minutes = 1 hour

F 16 quarts = ▒ gallons

G 1 dozen = ▒ things

H 15 feet = ▒ yards

I 4 gallons = ▒ pints

J 2 weeks = ▒ days

K ▒ hours = 1 day

L 1 year = ▒ months

M ▒ weeks = 21 days

N 9 feet = ▒ yards

O ▒ inches = 1 yard

P 9 quarts = ▒ pints

Q ▒ feet = 5 yards

R 14 pints = ▒ quarts

Checking up

Test 1

A Four girls were playing jacks. Six more girls came to play. Then how many girls were playing jacks?

B Twelve children were drawing a big circle on the ground to play a new game. Five of them went away. How many children were left?

C Two teams of boys were playing ball. There were 9 boys on each team. How many boys were playing ball?

D Eleven boys had red caps. Seven boys had yellow caps. How many more boys had red caps than yellow caps?

E Some boys were playing with tops. Five more boys came to play. Then 9 boys were playing with tops. How many boys were playing with tops to begin with?

F Twenty girls were playing a game. They were in 4 equal teams. How many girls were in each team?

G Jim had 7 stones at home. He picked up more stones on the playground. Then he had 16 stones. How many stones did he pick up on the playground?

H Some boys shared 36 marbles equally. Each boy got 9 marbles. How many boys shared the marbles?

Test 2

A Three groups of children were marching in circles. There were 7 children in each circle. How many children were marching in circles?

B Five girls took 15 sandwiches to the playground and shared them equally. How many sandwiches did each girl get?

C 17 boys were playing ball. 8 boys went home. How many boys were left to play ball?

D Some of the girls on the playground were playing with 27 jacks. Each girl had 9 jacks. How many girls were playing jacks?

E Tom had some baseball cards. Bill gave him 4 more. Then Tom had 13 baseball cards. How many baseball cards did Tom have at first?

F Jim had 18 red marbles and 9 yellow marbles. He had how many fewer yellow marbles than red marbles?

G Carol picked up 4 stones on one day and 7 stones on another day. How many stones did she pick up on the 2 days?

H Ann had 8 cents. She earned some more money. Then she had 16 cents. How much money did she earn?

Checking up

Test 1

A $8+9=\square$
B $16-7=\square$
C $4\times8=\square$
D $15-9=\square$
E $36\div6=\square$
F $7\times5=\square$
G $9+5=\square$
H $28\div4=\square$
I $6\times3=\square$
J $7+8=\square$
K $18\div6=\square$
L $11-5=\square$
M $4\times9=\square$
N $27\div3=\square$
O $13-8=\square$

Test 2

A $36\div4=\square$
B $15\div\square=3$
C $27\div\square=9$
D $18\div6=\square$
E $25\div\square=5$
F $14\div7=\square$
G $24\div6=\square$
H $18\div\square=9$
I $21\div\square=3$
J $24\div8=\square$
K $30\div\square=6$
L $32\div4=\square$
M $28\div\square=4$
N $15\div5=\square$
O $16\div\square=8$

Test 3

A $5\times3=\square$
B $28\div4=\square$
C $9+\square=14$
D $3\times9=\square$
E $16\div\square=2$
F $14-8=\square$
G $6+9=\square$
H $12\div\square=3$
I $\square+6=11$
J $17-8=\square$
K $9+\square=16$
L $14\div7=\square$
M $\square+8=15$
N $27\div9=\square$
O $8\times4=\square$

Test 4

A $36+18+55=\square$
B $7+2+9=\square$
C $486+339=\square$
D $8+4+6=\square$
E $47+60+23=\square$
F $742+208=\square$
G $12+10+78=\square$
H $278+321=\square$
I $6+8+2+5=\square$
J $27+60+38=\square$
K $582+179=\square$
L $500+391=\square$
M $8+6+5+7=\square$
N $59+11+82=\square$
O $619+283=\square$

Test 5

A $580-177=\square$
B $214-114=\square$
C $823-299=\square$
D $620-581=\square$
E $900-726=\square$
F $41-17=\square$
G $725-418=\square$
H $306-258=\square$
I $52-35=\square$
J $635-489=\square$
K $27-9=\square$
L $872-325=\square$
M $91-74=\square$
N $904-632=\square$

Test 6

A $\$.76+\$.24=\square$
B $\$4.03-\$.95=\square$
C $\$1.82-\$.17=\square$
D $\$2.19+\$.83=\square$
E $\$5.96+\$1.74=\square$
F $\$1.15-\$.46=\square$
G $\$.77+\$.19=\square$
H $\$8.23+\$1.28=\square$
I $\$.28-\$.19=\square$
J $\$3.11-\$1.48=\square$
K $\$4.20+\$2.80=\square$
L $\$8.04-\$1.96=\square$
M $\$5.00-\$.62=\square$
N $\$.43+\$.57=\square$

Test 7

A $\square+18=39$
B $462+384=\square$
C $57+93=\square$
D $581+\square=690$
E $\square+300=825$
F $48+21=\square$
G $215+\square=400$
H $616+275=\square$
I $\square+76=111$
J $320+\square=642$
K $84+59=\square$
L $\square+15=74$
M $33+18=\square$
N $186+\square=203$

Table of contents

This chart shows the organization of the arithmetic content of this book and indicates the kinds of social interests included in the pictures and problems. The book has been organized to keep the subject matter of arithmetic the center of the child's interest. Social material of interest to the child is contained in the pictures and verbal problems. The child's own social interests and experiences are brought to the book through these pictures and problems.

pages	skills and concepts	social interest
3-6	Addition basic facts for 2, 3, 5, and 7	On the way to school and on the playground
8-12	Subtraction basic facts for 2, 3, 5, and 7	A day at school
14-16	Addition and subtraction basic facts for 4 and 6	A birthday party
17-18	Multiplication basic facts for 4 and 6	A school puppet show
19-20	Division basic facts for 4 and 6	A school puppet show
21-25	Addition, subtraction, multiplication, and division basic facts for 8	Making toys
26-29	Addition, subtraction, multiplication, and division basic facts for 9	A trip to a toy store
30-34	Addition, subtraction, multiplication, and division basic facts for 10	A school picnic
37-41	Making equations for problems	Visiting the country
42-45	Number system: through two-figure numerals	Buying at the neighborhood store
46-49	Number system: preparation for carrying and borrowing	Buying at the neighborhood store
52-55	Reading, writing, and counting money through 99¢	Buying toys
56-58	Making change through 99¢	Buying toys
61-63	Imagined action. Situations in which groups are not actually moved together or separated	Playtime
64-65	Regrouping to recognize groups of 11 to 18. Preparation for basic facts for 11 to 18	A visit to the dime store
66-70	Addition and subtraction basic facts for 11	Fun at home
71	Calendar	
72-74	Finding how many more than and how many fewer than	Home activities
75-78	Finding how many were added or how many more are needed	Home activities
79-82	Addition and subtraction basic facts for 13 and 17	A trip to the seashore
86-91	Measuring in inches, feet, yards, pints, quarts, and gallons	Schoolroom activities
92-93	Finding how many equal groups (quotition)	A day at home
94-102	Addition, subtraction, multiplication, and division basic facts for 12	Activities relating to a picnic at a zoo
104-108	Addition, subtraction, multiplication, and division basic facts for 14	Saturday activities
110-113	Addition, subtraction, multiplication, and division basic facts for 15	Activities relating to food
115-118	Addition, subtraction, multiplication, and division basic facts for 16	Earning and spending money
120-123	Addition, subtraction, multiplication, and division basic facts for 18	Visiting the toy department
126-127	Understanding what determines the size of the equal groups and the number of equal groups in multiplication	Buying in the store
128-129	Changing measures expressed in one unit to equivalent measures expressed in larger or smaller units	Measuring activities at home
130-133	Understanding the effect of reversing the order of addends in addition and the factors in multiplication (commutative law). Understanding the reverse relationship of subtraction and addition and of division and multiplication	A day on the farm
134-138	Finding the size of the equal groups when the number of equal groups is known (partition)	Playing at home
139-141	Number system: through three figures	Buying at the neighborhood store
142-143	Number system: through four figures	Buying at the neighborhood store
144-147	Number system: preparation for carrying and borrowing through four figures	Buying at the neighborhood store

pages	skills and concepts	social interest
148-151	Reading, writing, and counting money through dollars and cents	Earning money
153-155	Addition of a seen one-figure number to a remembered two-figure number	An interesting walk
156-159	Addition of three or more one-figure numbers	Friends at play
160-163	Addition of two-figure numbers with and without carrying	A party at home
164-169	Addition of three-figure numbers with double and single carrying	School and store activities
170-172	Addition of numbers representing dollars and cents	Saving money
176-179	Subtraction of two-figure numbers with borrowing	Sharing with friends
180-186	Subtraction of three-figure numbers with borrowing	Keeping records
187-189	Subtraction of numbers representing dollars and cents	Spending money
192	Checking addition and subtraction	
193-196	Finding how many there were to begin with when the number of items added and the number of items resulting are known	Enjoying hobbies
197	Generalizations about zero in addition and subtraction	
198-201	Multiplication basic facts for 20, 21, 24, and 25	Visiting the grocery store
202-205	Division basic facts for 20, 21, 24, and 25	Visiting the grocery store
206	Ordinals as a system	
209-210	Uneven division involving one-figure divisors with dividends within the range of the basic facts for each divisor	A trip to the museum
212-213	Computing mentally in addition and subtraction	Playing school
214-215	Measures of time, including clock and calendar (seconds, minutes, hours, days, weeks, months, year)	Scheduled activities
215-216	Measures (dozen, ounce, pound)	
220-224	Multiplication basic facts for 27, 28, 30, 32, 35, and 36	Playing at home
225-229	Division basic facts for 27, 28, 30, 32, 35, and 36	Playing at home
232-235	Simple situations involving common factors and multiples as preliminary to reduction of fractions	Preparing for a school fair
237-240	Unit and non-unit fractions with denominators of 2, 3, 4, 5, 6, 7, and 8	A visit to the bakery
242-243	Geometric figures (circle, square, triangle)	Seeing what is around us
246-249	Review	Seeing what is around us
250-251	Evaluation	

Headings

Learning how
Lessons using the four-step teaching method to develop or review computational skills

Moving forward
Lessons developing other new material, including basic facts, number system, money, and measurement

Exploring problems
Lessons developing specific problem-solving techniques

Using arithmetic
Maintenance and practice in solving verbal problems

Keeping skillful
Maintenance and practice in computation, measurement, number system, and money

Checking up
Tests of various types: inventory, achievement, diagnostic (End-of-block), and problem-solving

Thinking straight
Lessons involving special aspects of quantitative thinking

Looking back
Lessons involving reteaching or review of previously-taught skills

Side trip
Lessons on various topics related to the arithmetic program: calendar, ordinals, etc.

Summary of mathematical content

Numerals and the number system
- Recognition of groups larger than 10
- Reading and writing numerals to 9999
- Place value through thousands
- Regrouping as required in carrying and borrowing
- Ordinals (as a system)

Addition of whole numbers
- Concept of addition
- Basic facts for all groups
- Changing order of addends
- Addition of three or more one-figure numbers
- Addition of two-figure numbers
- Addition of three-figure numbers
- Addition involving the cents' point

Subtraction of whole numbers
- Concept of subtraction
- Basic facts for all groups
- Relation between addition and subtraction
- Subtraction of two-figure numbers
- Subtraction of three-figure numbers
- Subtraction involving the cents' point

Multiplication of whole numbers
- Concept of multiplication
- Basic facts through products of 36
- Changing order of factors

Division of whole numbers
- Concept of division
- Basic facts through dividends of 36
- Relation between multiplication and division

Measurement
- Concept of standard unit
- Recognition of right and wrong procedures
- Measures of capacity—pint, quart, gallon
- Measures of length—inch, foot, yard
- Measures of quantity—dozen
- Measures of time—second, minute, hour, day, week, month, year
- Measures of weight—ounce, pound
- Reduction of measures (within scope of processes taught)

Money
- Recognition of all coins and paper money
- Value relations among the coins
- Counting money—dollars and cents
- Reading and writing numerals that represent dollars and cents
- Making change
- Addition involving the cents' point
- Subtraction involving the cents' point

Fractions
- Concept of fractions
- Unit and non-unit fractions with denominators of 2, 3, 4, 5, 6, 7, and 8
- Readiness for reduction of fractions

Problem solving
- Making equations for eight types of problems
- Finding the new total group when the sizes of the smaller groups are known
- Finding the remaining group when the size of the removed group is known
- Finding the new total group when the size and number of the equal smaller groups are known
- Finding the number of equal groups when the size of the equal groups is known (quotition)
- Finding the size of the equal groups when the number of equal groups is known (partition)
- Finding how many were added or how many more are needed when the number to begin with and the resulting total number are known
- Finding how many there were to begin with when the number added and the resulting total are known
- Comparing two groups by finding how many more or how many fewer one group is than the other

Vocabulary

Seeing Through Arithmetic, Book 3, contains 440 different words. The complete list of words is in the Teaching Guide. Of the 440 words total vocabulary, 148 were used in the preceding book, *Numbers in Action*. Children who have completed The New Basic Reading Program of the Curriculum Foundation Series, through the new *More Friends and Neighbors* (2^2), will be familiar with 179 of the 292 words not used in *Numbers in Action*. For these children, only 113 words will be new in this book. Of these 113 words, 63 are used in the new *Streets and Roads* and the new *More Streets and Roads*.

The following forms of known words are not counted as new and therefore are not listed: inflected forms made by adding *s, es, d, ed, ing,* er or est of comparison (including those forms made by changing y to *i*, dropping the final e, or doubling the final consonant in the root word); derivatives formed by adding er of agent or the suffixes -en, -ly, -y, -th, -ty, and -teen; possessives; compounds of known words; and contractions in which the apostrophe represents only one omitted letter.

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DEC 12 '69			
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